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ABSTRACT

A study was made to establish the patterns in past library automation development activities within the Federal Government of the United States so that these could be available for setting the boundaries for a generalized system design for computerized library operations. More than 50 administrative and technical personnel within the Federal library community were interviewed, and information was compiled on 28 libraries and information centers among eight of the Executive Departments and four Independent Agencies. Pictures of both the technical and administrative sides of library operation were built up. These pictures were used to form a composite overview of technological movements within the Federal Government toward library automation, and the forces acting as constraints on such movements. Few strongly cohesive trends in automation were found among the library and information activities of specific agencies. But, in spite of this, it appeared that generic automated systems with broad parametric application to both technical and administrative considerations could be devised. Appended to the report are (1) supplemental materials on methodology and (2) data summaries, backing up the discussions on data reduction and analysis. Some fourteen Case Reports prepared during the study are published as separate volumes. (JH)

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Project No. 8-9031
Contract No. OEC-0-8-089031-4627(095)

DEVELOPMENT TRENDS IN FEDERAL LIBRARY AND INFORMATION CENTER AUTOMATION

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June 1969

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

PREFACE

The study reported herein is based on interviews with many persons active within the Federal Library community, including Head Librarians, Library Administrators, and persons in administrative positions calling for policy decisions affecting the operations of libraries and information centers within their agencies. From information gleaned from the interviews, together with that obtained from other sources (both published and unpublished), pictures of both the technical and administrative sides of the operations were built up. These pictures helped to form a composite overview of technological movements in the library community with respect to automation, and the forces acting as constraints on such movements.

The study does not purport to be a review of all libraries within the Federal Government; it is based rather on a "sampling" of institutions belonging to agencies of various "classes". The ultimate goal is, in any case, to establish generalizations both as to the nature of the agencies which, historically, have found it necessary to move into automation, and for those who have, to discover the technical situation that brought this about. Armed with this knowledge, it may then be possible to design - at least functionally - generalized or generic automated systems which are readily adaptable to situations with specified characteristics.

From the technical point of view one might have hoped that, through active cross-fertization within the Federal community, commonality of problem and purpose, and similar administrative constraints, approaches to automation would be similar. Actually, however, such seems not to have been the case: most developments seem to have been fairly independently conceived and executed. But, in spite of the apparent lack of strongly cohesive "trends", there are reasons to believe that generic systems with broad parametric application could be devised. One would however be faced with a requirement to "sell a concept;" it would be unlikely that such systems would be readily accepted unless it could be demonstrated that the purposes of each library could be achieved therewith, and that much wasteful duplicative effort could be saved.

The study yielded, in addition to this Summary Report, some fourteen Case Study Reports, covering the library and information activities of specific agencies. While these have not been released at the present time, interested or involved persons may request access to them through application to the U.S. Office of Education, Bureau of Research, making reference to Project Number 8-9031. These reports are also on file with the Federal Library Committee, and access may be requested there.

It is a pleasure to acknowledge with thanks the contributions to this work made by some three score Federal librarians and other officials who gave generously and patiently of their time in discussion with the interview teams of Information Dynamics Corporation. These contributions are perhaps individually unidentifiable in the final product, but are no less significant for that fact. In addition the help and advice given to the study team by members of the Federal Library Committee Task Force on Automation during the study were of immeasurable value, and are likewise gratefully acknowledged.

Paul F. Dunn
Vice President
Information Dynamics Corporation
June 1969

TABLE OF CONTENTS

Page

SUMMARY vii

I. INTRODUCTION 1

A. Background to the Study 1

B. General Approach to the Study 2

C. Structure of this Report 3

II. METHODOLOGY 5

A. Introduction 5

B. Model Development 6

1. Classification of Government Agencies 6
2. The Measures of Automation 9
3. Level of Service 22
4. Index of Input Processing Functions 24
5. Identification of Variables 30

C. Data Collection Tools and Procedures 32

1. Interview Guides and Records 32
2. Interview Procedures 34

III. DATA COLLECTION 36

A. Selection of Agencies and Libraries 36

1. Agencies Selected 36
2. Summary of Interviews 36

B. Case Studies and Reports 36

1. Objectives 36
2. Outlines of Case Study Reports 44

IV. DATA REDUCTION AND ANALYSIS 51

A. Data Reduction 51

B. Analysis 64

1. Analysis of Administrative Factors 64
2. Addressing the Automation Development Plan 73

TABLE OF CONTENTS (cont'd)

Page

V. FINDINGS AND CONCLUSIONS 97

A. On Where Automation Occurs 97

B. On When Automation Occurs 98

C. Conclusions of Possible Import to the Non-Federal Community 99

1. Budget Factors 99
2. Missions and Organizational Attachment 99
3. Library Technical Factors 100

PARTIAL LIST OF REFERENCES 103

Appendix A. Supplement to Methodology A-1

I. Speculative Measures of Library Integration A-1

II. Level of Service A-5

III. Data Collection Tools A-18

A. Guide for Administrative Interviews A-19

B. Administrative Interview Record A-22

C. Technical Interview Guide A-33

D. Technical Interview Record A-41

Appendix B. Data Summaries B-1

LIST OF EXHIBITS

Exhibit No. — Page

1. Agencies Classified and Abbreviations Used (3 pp). 10
2. Classification of Executive Departments. 13
3. Classification of Independent Agencies. 14
4. Classification of Agencies of the Executive Office of the President. 15
5. Classification of Agencies of the Legislative and Judicial Branches. 16
6. Levels of Automation, by Function and Material. 20
7. Selection of Level of Automation by Type of Material. 21
8. Library Function Groups Used in the Analysis. 23
9. Relative "Work Function" of Input Processing Functions. 26
10. Relative "Work Function" by Material Type and Function. 27
11. Mission Classification of Agencies Studied. 37
12. Mission Classification of Agency Components Visited. 38
13. List of Agencies and Interview Points of Contact. 39
14. General Outline for Departmental Case Study Reports. 45
15. Outline for Appendices to Case Study Reports. 46
16. Listing of Case Reports. 49
17. Holdings and Annual Growth Rates for the Collection of Libraries Surveyed. 52
18. Aggregated Administrative Factors. 57
19. Budget Data on Agencies and Their Libraries. 59
20. Professional Staff, Education, Experience and ADP Training. 60
21. The Library Users. 62
22. Calculated Measures for Library Automation. 63
23. Agency Physical Factors versus Level of Service. 66
24. Separation of Libraries by Administrative Factors. 67
25. E and S, Average, against Budget Factor. 68
26. Service S, and E, Average, versus Budget. 70
27. Level of Equipment versus Individual Output. 71
28. Level of Service versus Unit Cost of Service Output. 72
29. Library Budget versus Non-Book Holdings. 75

Exhibit No.

30. Automation Sequences of Surveyed Libraries. 76
31. "Order of Encounter" in Automating Functions and Materials. 83
32. First Function and First Material Automated. 85
33. Past Automation Sequences. 87
34. Future Automation Sequences. 89
35. Association Between Relative Input Index and Sequence of Automation. 92

Appendix A - Exhibits

Exhibit A-1 Level of Integration: Method and Worksheet. A-3

Exhibit A-2 Extended Levels of Service. A-6

SUMMARY

A. The Problem

The Office of Education and the Federal Library Committee share a common interest in advancing the art and science of librarianship, and in promoting the utilization of modern technology in library operations. The present study is the second in a sequence of studies which should ultimately produce a generalized system design for computerized library operations. It would be hoped that given such a design, a library could evaluate its own requirements and readily adapt the system to its own use, thereby obviating much costly and redundant development effort.

The objective of this study is to establish through a comprehensive study of the Federal libraries, the patterns in past library automation development undertakings so that these can be available to set the boundaries for the main design. The library approaching automation has a difficult choice to make as to

- whether to automate at all;
- where to start; and
- the route to follow.

None of these decisions is easy. But benefits are to be had from a knowledge of how others have made the same decisions, and how certain problems have been approached. This work seeks to clarify the patterns in automation developments that have taken place, and to synthesize from these reasonable paths that may be followed by those approaching automation planning and implementation for the first time. Similarly, from an interrogation of persons already engaged in, or planning, automation, it is desirable to deduce where they plan to go.

A further, and more subtle objective, is war ~~to~~ attempt to show something of the nature of the forces at play that may influence first, the fact of any automation at all, and second, the way automation is approached. Thus, the study calls for an examination of both the administrative context within which the libraries are constrained to operate, and the technical properties of the library that serve to establish their direct requirements for information products and services, and indirectly to establish their acquisitions and input processing requirements.

Scope

This study has employed a case study approach, in which the Federal Library community has been sampled; in depth interviews conducted with technical people who have indirect responsibility for the library operations, and also with agency administrative personnel at higher levels but who also have responsibility for the library; and comprehensive Case Study Reports thereafter prepared. These reports sought to provide an overall picture of the agency organization; its mission; its structure and requirements for control and coordination; its concern for information activities with which the agency is involved and the manner of funding these. The second portion of the reports covered a presentation of the technical properties the library or libraries contained within the agencies. The technical interviews attempted not only to elicit the technical picture, but also to substantiate the administrative relationships.

The survey involved more than fifty interviews, distributed among technical and administrative personnel. In the course of the project information was compiled on twenty-eight libraries and information centers scattered among eight of the Executive Departments and four Independent Agencies. From these fourteen Case Reports were prepared covering the subjects described above.

The data gathered from the case studies were summarized and collated, then analyzed for trends that relate to the questions on automation developments.

Methods

The selected approach to the study involved the development of interview materials to assist both interviewee and the interview team. Accordingly a guide was prepared for both technical and administrative interviewees to apprise them, in advance of the interview, of the scope of the interrogation. The interviewer was supplied, for each type of interview, with an interview record - a comprehensive device designed both to alert the interviewer to specific question areas, and to facilitate the recording of data.

For purposes of analysis of the data, a set of measures relating to automation were devised: one related to the measurement of Level of Equipment, simply a classification scheme ranging from manual to digital computer employed in direct dialog mode; another was an arbitrary measure of "integration" of the libraries' functions and applied equipments; and still another measured output services by a numerical index. Similarly, administrative factors were grouped together into sets, each set consisting of four to six related binary propositions, and a numerical scale developed for each. The analysis consisted largely of comparing combinations of these various measures with certain direct numerical attributes of the libraries, in order to discover consistencies in approach to automation, and consistencies in circumstances that may influence the actions taken.

Results and Conclusions

Results of this study indicate the dual effect of both administrative and technical factors on the automation activities of Federal libraries. The single most important administrative factor is that which embraces favorable budget and funding conditions: adequacy and direct line-item budgeting for the library in the budget of the parent agency.

Even with favorable budget factors, high levels of automation or high levels of service also seem to require favorable conditions with regard to organizational attachment and internal library staffing and management. Research and development as either a primary or secondary agency mission does not of itself imply a high probability of a high level of automation. However, the existence of an explicit mission statement calling for the dissemination of information outside the agency, is strongly related to the existence of automation in the agency's libraries.

Although budget factors are important, no such clear cut relationship exists between the actual magnitude of the budget and the level of service or level of automation. Libraries with budgets greater than $100, 000 and non-book holdings greater than 65% of the total collection are nevertheless found to have a generally high level of automation, with broad applications of digital equipment in a variety of library operations. Input processing functions were chosen as the first to be automated by ten of the nineteen automated libraries surveyed. Publications seems to have been second choice.

Journals and documents were the dominant first choice of materials to be automated. Institutions whose active journal subscriptions exceed approximately 20% of their combined acquisition rate for books and documents, have chosen journals as the first target in automation. Institutions whose document acquisition rate exceeds the book acquisitions plus ten times the number of active journal subscriptions have chosen their document collection for the first step in automation. In terms of relative holdings, a large proportion of document materials carries substantially greater weight than do journals, in the selection of material to be automated first.

Implications of these findings in the non-Federal sector are expected to be strong - particularly the technical factors. The weak relationship between library dollar budget and automation and service level found among government libraries, however, may be found to be quite strong in the non-government libraries. Mission-related and organizational-attachment factors are likely to have similar influences on libraries in both communities. Although the technical constraints governing specific actions in both types of library may be similar, the thresholds for initiation of action may very considerably.

I. INTRODUCTION

A. Background to the Study

The study covered by this report is the second of a series of studies proposed by the Federal Library Committee, and supported by the Office of Education having as its ultimate objective the development of a generalized automated systems design applicable to the Federal library community; or, if a single generalized design is infeasible, the development of a small set of generic designs applicable to specific recognizable classes of federal libraries.

The first phase of the study sequence produced a report entitled "Summary Reconnaissance Paper on Trends Toward Library Automation Based on an Initial Analysis of the Literature," prepared by the Center for Computer Sciences and Technology of the National Bureau of Standards. This report dealt with the literature on library automation both federal and non-federal. It was indicated that while there is considerable effort toward library automation, much of it has been piecemeal, directed toward specific local applications, and only in a few instances has a total system design been undertaken. The point was stressed that standardization both of machine languages and of bibliographic retrieval languages was a necessary prerequisite to bringing about large, highly integrated library and information center networks capable of extensive, rapid and high-level services. Generally this work painted the picture of broad requirements and long range trends which must be approached through systematic development sequences in order to reach the objectives.

One purpose of the present study is to look more closely into the Federal library community to see what is actually the status and plans relating to automation in libraries to discover how these long range objectives are being approached.

The work being reported here approaches the establishment of developmental trends in library automation through a series of detailed interviews in the Federal library community, followed by an in-depth analysis to detect the major movements. The purpose of this work is to provide additional basic information for the eventual development, in subsequent phases, of the generalized designs called for as the final product of the effort.

The Federal Library Committee's Task Force on Automation recognized, while preparing the specifications for this study, the importance of having knowledge regarding the level of achievement of past and present automation efforts, even those that proved only marginally successful or were viewed as unsuccessful; what measures were being employed within government agencies to measure their accomplishments; how staff and financial constraints affected the choice of goals and the rate of their achievement; and especially what approaches have seemed to have the highest pay-off.

B. General Approach to the Study

The underlying philosophy of the approach to the present study is best stated as

> ".....non-uniform, sporadic progress in a developing field is a not uncommon phenomenon, due to the absence of a unifying force. In the present case - in the library and information sciences, the missing force is of an administrative or managerial nature. The only way in which distinct developmental efforts can be cohesive and mutually supplemental is by establishing, insofar as possible, self-consistent constraints and common over-all objectives.
>
> "Thus the 'problem' that exists today is to provide the unity of purpose that is lacking; to structure a program for development in the (Federal) library community in which the many independent agencies play mutually supporting roles."*

Thus it was suggested that the forces that shape new developments in an applied field such as library automation consist of administrative as well as technical factors, and that the understanding of "development trends" calls for an appreciation of both.

Accordingly the study undertook to ascertain by personal interview the administrative context lying about and above the libraries and other information activities within an agency; to elicit from direct library management the developmental history, present automation status and future plans; and to relate the two sets of factors. From this it was hoped that not only could visible technical trends be noted, but that non-technical forces could be evaluated (at least in a qualitative way) for the extent to which they might condition technical developments.

---

* Development Trends in Library and Information Center Automation, A Proposal to U.S. Office of Education, Information Dynamics Corporation, May, 1968. pp 3-4.

Among the administrative factors that appear related to observed developments are:

- the agency mission and the role of the libraries in supporting that mission;
- the agency personnel and financial resources, and the proportions devoted to supporting the library activities;
- the presence of a direct mission mandate to carry out information functions outside the agency;
- the existence of formalized plans or planning processes, instituted by higher administrative levels, for developing the information resources of the agency; and
- the organizational and geographical structure of the agency, in particular the organizational locations of the libraries.

Clearly of great importance in determining what, when, and how automation occurs, are a variety of technical factors, among which are

- library services to be provided;
- the characteristics of the user population: size, professional discipline, and geographical distribution; and
- the nature of the collection upon which the services depend: size, rate of growth, and composition by subject, form and medium.

These and certain other factors are thought to be relevant to determination of trends, and are explored in the sections to follow.

C. Structure of this Report

The study is presented in the four sections that follow. Section II describes the methodology developed and employed in the study, principally model development and data collection. The agencies selected for study and the Case Reports written for these are described in Section III on Data Collection. The Data Reduction and Analysis are discussed in Section IV, where automation trends are brought out. Findings and Conclusions are presented in Section V. In addition, supplemental materials on Methodology are found in Appendix A, and Data Summaries, backing up the Data Reduction and Analysis are found in Appendix B.

The Case Reports covering the individual case studies are published as separate volumes.

II. METHODOLOGY

A. Introduction

The methodological approach to the study of development trends consisted of the following major activities:

1. The development of interview guides, data gathering tools, and interview procedures;
2. Selection of government agencies to be studied, identifying the libraries to be visited, and the individuals at administrative levels above these libraries to be interviewed;
3. Development of model for analysis;
4. Data Collection;
5. Preparation of Case Study Reports;
6. Data Reduction; and
7. Data Analysis.

These activities did not all occur sequentially; in particular the study began with development of tentative interview guides, one for administrative interviews and another for technical interviews, which were tested in a set of planned preliminary interviews, and subsequently underwent two major revisions. Similarly, the selection of agencies for preliminary interviews was based on a tentative classification of agencies, along with some prior knowledge of the status of library automation in the agency; and underwent refinement as the development of the model for later analysis proceeded. Naturally the preparation of Case Reports took place throughout the latter two thirds of the study.

In presenting the study methodology, therefore, the major subjects to be discussed are:

- Model Development;
- Data Collection Tools and Procedures; and
- Data Reduction and Analysis

These discussions are presented in Sections II. B. and II. C., supplemented with corresponding sections in Appendix A wherever the detail becomes too massive for presentation in the main body of the report.

B. Model Development

There are two objectives to be met in the development of a model of the community to be examined in a study of the type being reported here. These relate to the fact that observed phenomena must arise from two types of consideration: the first is the set of technical considerations which includes both the physical characteristics of the library and the state-of-the-art in automation equipment and applications techniques; and the second is the set of administrative factors which provide the context or constraints that affect the technical decisions. The model therefore must not only be able to provide a measure of status of automation, and the directions of technical movements, but also to relate these to administrative factors which may be forcing them.

From the outset it was believed that an attempt to apply elaborate statistical procedures to the analysis of the data was likely to be frustrated by inadequate and inaccurate data, not stemming so much from inability to garner information from the libraries, as from the varieties of ways in which data are kept. However, there was an attempt at reasonably rigorous classification of agencies, according to definitions that were thought appropriate; and similarly in the assignment of levels of applied equipment and levels of service, definitions were developed to remove the arbitrariness as much as possible.

1. Classification of Government Agencies

From the outset of the study it was believed that the paths of development in library automation that would be seen would relate to factors that basically characterize the agency in which the library was located; that the basic purposes and missions of the agency determine the activities that must be undertaken to accomplish those missions; and these in turn determine the requirements for library support. Thus one of the first tasks undertaken in the study was the classification of government agencies by mission and activities.

This early classification was useful in selecting those agencies to be visited in the course of the study. Some revision of the classification was undertaken later in order that specific class membership could be treated as a variable against which to compare "level" of automation.

a. Definitions of Agency Classes

It is found that large government agencies generally have a wide variety of responsibilities so that it is difficult to make a clean-cut class assignment, especially in the larger Executive Departments. Therefore agencies were identified as having functions, usually of more than one class, and a judgment was made as to which functions dominated. The agency classes used in this study are defined below by descriptions of their major component functions or activities.

REGULATORY (Law, policy, regulation, and standards)

(1) Development and implementation. This function includes the studies prerequisite to and the writing of, laws, policies, and regulations, and the procedures for implementation thereof. The reference is specifically to those laws and policies, etc., which are necessary to the achievement of mission and are not created for the purpose of internal management or control of the agency. The origins of the requirements for such regulations are exogenous to the parent agency, and usually to the government itself.

(2) Compliance. An organization having this function is charged with the responsibility for investigation, inspection and enforcement of law, policy or regulation.

(3) Adjudication. This term is taken to mean the functions of analysis, review, or evaluation of laws, policies, and regulations. Such adjudication comprehends the evaluation of both the legality of regulations and effectiveness and appropriateness of their application.

RESEARCH AND DEVELOPMENT

(1) Administration. The planning and overall management of research and development programs, whether performed in-house or performed on contract. Planning would be relatively of broad scope - identifying the areas in which work is needed in order to achieve the mission; budgeting and managing funds; and an overall review of progress.

(2) Procurement and Monitorship. Arranging for the direct procurement of out-of-house R&D (not necessarily out-of-government, however); preparing requirements; and monitoring the work.

(3) Conduct of R&D. In-house performance of research and development programs relating to the parent mission.

SUPPORT

(1) Direct Support. An organizational component designated as "direct support" is so characterized because that component performs a function which is essential to the achievement of the mission of its parent. The direct support function is implied by the mission of the parent, and is an integral, but subordinate, part thereof.

(2) Service Support. An organizational component designated as "service support" is so characterized because it performs general assistance in the form of goods or services necessary to the operation of the parent organization, but not uniquely defined by the mission or function of the parent.

(3) Administrative Support. An organizational component designated as "administrative support" is so characterized because it performs functions that arise because an organization must exist to perform the assigned mission of the parent. This class of support function is a consequence of the mere existence of an organization with a purpose, not related strongly to what the purpose is.

EXTERNAL SERVICE PROGRAMS

These functions refer to the existence of an active interface with the universe external to the parent agency or component, and the flow across that interface relates directly to the parent mission. The breakdown is by who shares the interface: US Public; State or Local Government or public institutions; other Federal Agency; Foreign Public; Foreign Government. A further breakdown is made, in the case of interfaces with the public (either U.S. or Foreign), into "Administer" or "Conduct", depending on whether the interface involves the direct face-to-face confrontation of agency personnel with the general public.

b. Assignment to Classes

The initial assignment of agencies to classes was accomplished by study of the mission statements as given in the U.S. Government Organization Manual, and noting the specific functions called for. It should be noted that a special point of view is involved here. In the initial classification the agency was viewed in the aggregate (entire agency or executive department), and as a component of the "Government". Thus when an agency performs a mission it is "for the Government", where the latter is viewed in the aggregate as an institution. Thus an agency such as the Civil Service Commission is regarded as the "personnel department" of the government, so it is classed as Support, i.e., Administrative Support.

After identification of the types of function or activity associated with the agency, a judgment of which type of function was dominant was made, and the agency characterized by specifying the order of dominance of the types of function. This was entirely judgmental at the outset, and a more refined estimate was made in some instances by an analysis of budgets for types of program, and prorating the amounts by program class.

The agencies so classified, and results of this classification are shown in Exhibits 1-5, where the agencies are grouped according to first and second dominant functions, and grouped then by Executive Departments (Exhibit 2), Independent Agencies (Exhibit 3), Agencies of the Executive Office of the President (Exhibit 4), and Agencies of the Legislative and Judicial Branches (Exhibit 5).

In each of these an agency found in a given row and column has the function associated with that row as its primary function, and the function associated with the column as its secondary function.

2. The Measures of Automation

It is patently difficult to say when a library is "automated" and when it is "not automated." Is it automated only if it applies a digital computer to all its functions? Is it automated if the computer is used only in connection with certain library functions or perhaps several functions but only with certain materials (such as serials)? Is it automated if only EAM equipment is used; or with some functions handled by EAM equipment and others manually performed? These questions relate to equipment and its applications to library functions; but nothing is said about system integration. Even where sophisticated

Independent Agencies	Abbreviation
National Mediation Board	NMB
Smithsonian Institution	SmI
U.S. Information Agency	USIA
Tennessee Valley Authority	TVA
Atomic Energy Commission	AEC
National Aeronautics and Space Administration	NASA
U.S. Arms Control and Disarmament Agency	ACDA
National Science Foundation	NSF
Federal Communications Commission	FCC
Securities and Exchange Commission	SEC
Interstate Commerce Commission	ICC
Federal Trade Commission	FTC
Federal Power Commission	FPC
Federal Maritime Commission	FMC
Civil Aeronautics Board	CAB
Small Business Administration	SBA
National Labor Relations Board	NLRB
Tax Court of the U.S.	TCt
U.S. Tariff Commission	TCom
Federal Reserve System	FRS
D.C. Government	DCG
Selective Service System	SSS
Civil Service Commission	CSC
General Services Administration	GSA

Exhibit 1. Agencies Classified and Abbreviations Used

Executive Departments	Abbreviation
Post Office	USPO
Housing and Urban Development	HUD
Health, Education and Welfare	HEW
Commerce	USDC
Labor	USDL
Interior	USDI
Agriculture	USDA
Defense	DOD
Army	USA
Navy	USN
Air Force	USAF
Transportation	DOT
State	USDS
Justice	USDJ
Treasury	USDT
Executive Office of the President	
Office of Economic Opportunity	OEO
Office of Emergency Planning	OEP
Office of Science & Technology	OST
National Security Council	NSC
Council of Economic Advisers	CEA
National Aeronautics and Space Council	NASC
Bureau of the Budget	BOB

Exhibit 1 (cont'd) Agencies Classified and Abbreviations Used

Legislative & Judicial	Abbreviation
Library of Congress	LC
Senate	SEN
House of Representatives	HR
Supreme Court	SupCt
Government Accounting Office	GAO
Government Printing Office	GPO

Exhibit 1 (cont'd) Agencies Classified and Abbreviations Used

		SECONDARY FUNCTION			
		EI	RD	REG	SPT
PRIMARY FUNCTION	EI	USPO	HUD HEW USDC	USDL USDI USDA	
	RD				
	REG	DOD DOT USDS		USDJ	USDT
	SPT				

Exhibit 2. Classification of Executive Departments

		SECONDARY FUNCTION			
		EI	RD	REG	SPT
PRIMARY FUNCTION	EI	NMB VA	SmI	USIA	TVA
	RD	AEC; NASA; ACDA; NSF			
	REG	FCC; SEC; ICC; SBA; FTC; FPC; CAB; FMC; NLRB; FRS; TCt; TCom			
	SPT	DCG		SSS	CSC;GSA

Exhibit 3. Classification of Independent Agencies

		SECONDARY FUNCTION			
		EI	RD	REG	SPT
PRIMARY FUNCTION	EI			OEO	
	RD				
	REG				OST NSC CEA NASC
	SPT			OEP	BOB

Exhibit 4. Classification of Agencies of the Executive Office of the President

		SECONDARY FUNCTION			
		EI	RD	REG	SPT
PRIMARY FUNCTION	EI	LC			
	RD				
	REG			SEN HR SupCt	
	SPT				GAO GPO

Exhibit 5. Classification of Agencies of the Legislative and Judicial Branches

equipment is employed it is possible to have a "loosely connected" system, where functions are performed more or less independently. On the other hand a totally manual system could be both highly integrated and with a perfect match between services and service requirements.

An awareness of questions and considerations such as these early in the project led to the decision that a satisfactory measure of automation had to have several properties. It had, naturally, to reflect the level of (sophistication of) equipment being applied to library functions; it had to recognize "partial" automation with respect to both functions and materials; and it should recognize degree of integration of the library functions. It had to be possible to tie this to level of service in some fashion.

An objective of this study is to identify such trends as may exist in library automation, and no question is asked about whether a given institution should automate its library. However, it would be instructive if the analysis were able to show the set of circumstances (including both technical and administrative) where automation is not being undertaken, and yet the library meets its system requirements.

In any event a device for measuring three aspects of "automation" was developed: level of equipment applied; library functions performed or aided thereby; and level of integration. The latter aspect, as it turns out, calls for a detailed work flow chart of the library which was not usually available, and could not be constructed from interview data. (See App. A, Sec. I.) Thus, where this number is used it is obtained by pure judgment based on knowledge derived from interview, and no great faith is to be placed upon it.

a. Level of Equipment

A spectrum of various types of equipment employed in library operations was constructed, ranging from "none" through digital computers in on-line or direct dialog mode. This variable is called E (relating to equipment) and is given five values:

E=1: Manual; to be associated with no equipment more sophisticated than ordinary typing and reproduction equipment.

E=2. Aided Manual, implying rudimentary card systems, optical cards (such as Peek-a-Boo), Termatrex, and similar equipment.

E=3. EAM, associated with the use of sorters, collators and tabulators.

E=4. Digital Computer Equipment.

E=5. Digital Computer in Direct Dialog. This category implies terminal devices such as keyboard I/O, video displays and light-pen input, etc.

b. Functions and Materials

Later on, when the level of service is discussed a detailed description of library functions as used in this analysis will be given. These were aggregated, for the purposes of developing levels of automation, into five functions, each of which may be associated with four broad classes of materials:

(a) Book/Monograph

(b) Serials/Journals

(c) Documents

(d) Microforms

The five categories of functions were

(a) Acquisition (Selection/Ordering)

(b) Input processing (Physical processing/ Cataloging/Indexing)

(c) Reference (Search/Retrieval/Referral)

(d) Printing/Publication

(e) Circulation (Loan-local and ILL/non-returnable dissemination)

A straight numerical averaging process of levels by function and by material would be very convenient. However, such a method does not recognize the relative sophistication involved in undertaking to automate the various functions; nor does it account for relative traffic loads with respect to the types of input materials. Ideally, in obtaining the values for E, for a type material or the library as a whole, each class of material and each function would be given weights that reflect the relative inherent difficulty of automating a type function, a type input, and the relative traffic in each class of input. Choosing such weights, however, would be purely speculative, and, while it might have methodological value, is not undertaken here.

Instead the functions are merely ranked according to inherent complexity, as follows:

1. Input Processing (Tagging only)

2. Reference & Retrieval (Searching)

3. Acquisitions

4. Publication

5. Circulation

6. Input Processing (Physical only)

Exhibit 6 shows, for Books, Journals, and Documents hypothetical levels of automation that exist for each of the several functions, in the order listed above. The breakout of "Tagging" as a highly sophisticated machine application, dominating all the rest, is done to allow for that possibility in a very advanced library. Physical Processing, such as production of book pockets and cards is then ranked lowest of all.

The best method for evaluating the level is to plot a graph, such as Exhibit 7, showing for each material the level of automation of each function. Proceeding down the function list, along the abscissa to the first automated function, that point is plotted; from that point the 45 degree line is drawn. The level E that is to characterize that material is that associated with the lowest ranked function which falls on or above the line. In the case of books this is function 4, Publication, for which E=4 (the point d on the graph). For journals the level E=3 is established by the Reference function. In the example the level of automation for each material is different, E(B)=4, E(J)=3, and E(D)=2. Which is to be chosen has to be determined by relative traffic. The relative traffic is based on a per-issue count for journals (ten times the number of active journal subscriptions) and single counts of books and documents. In the example of Exhibits 6 and 7, both Journals and Documents account for 40% of input, while books account only for 20%. The score,

$$
\begin{aligned}
E(\text{Library}) &= (0.2)4+(0.4)3+(0.4)2 \\
&= 0.8+1.2+0.8 \\
E &= 2.8
\end{aligned}
$$

Material		Books	Journals	Documents
Rel. Input Traffic - %		20	40	40
Input Processing (Tagging)	E = 1	X	X	X
	2			
	3			
	4			
	5			
Reference & Retrieval	E = 1	X		
	2			X
	3		X	
	4			
	5			
Selections & Acquisitions	E = 1			
	2	X		X
	3		X	
	4			
	5			
Publication	E = 1			
	2			
	3			X
	4	X	X	
	5			
Circulation	E = 1		X	
	2			
	3	X		X
	4			
	5			
Input Processing (Physical)	E = 1		X	X
	2	X		
	3			
	4			
	5			
Level of Automation		4	3	2

Exhibit 6. Levels of Automation, by Function and Material

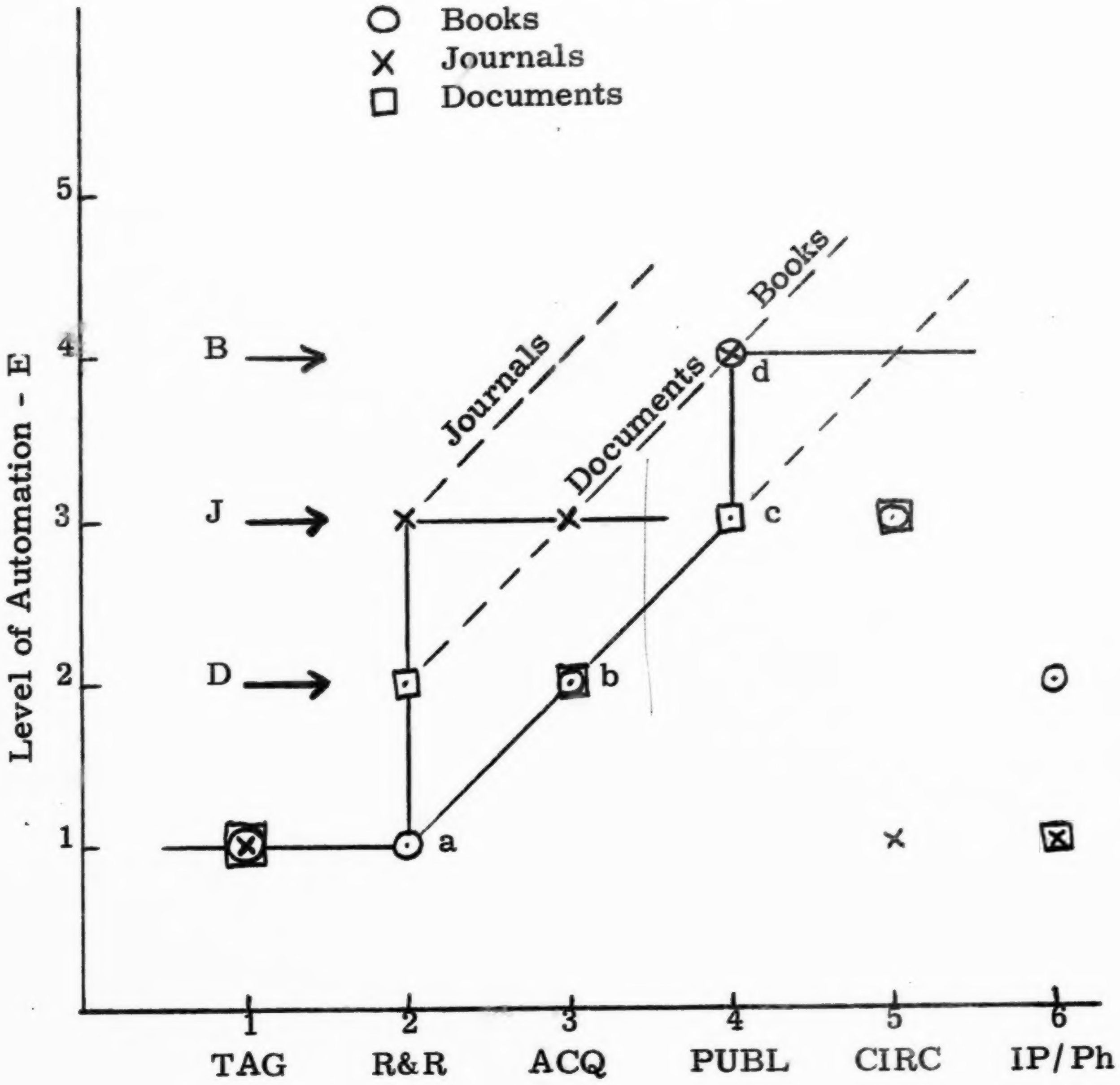

Exhibit 7. Selection of Level of Automation by Type of Material

This method prevents giving high credit to a high level of automation of a low traffic material; and gives credit (relatively) to not automating functions associated with a material which represents an insignificant proportion of the input.

It should be pointed out, before leaving the question of measures of level of automation that one extremely important function, that of physical storage, has been deliberately omitted from consideration. While there may be, in fact, a long-range trend toward employment of automatic electro-mechanical file systems for storage and retrieval of books and other materials (such systems for microfiche are not uncommon even now), it was felt that an attempt to give proper attention to this would becloud the issues with respect to computer applications. Hence no information was obtained on this subject during interviews, nor was any attempt made to classify the myriad of physical storage and retrieval devices that are commercially available.

3. Level of Service

The concept of "Level of Service" is an adaptation and extension of ideas offered by Strable.* In this work Strable described what he called Minimal, Intermediate, and Maximal levels of libraries from the point of view of the functions performed if the library operated at that level. In this study the concept was extended as follows: First an attempt was made to describe all functions of a library in generic terms and with a reasonable level of detail, then for each of these a gradually expanding scope of activity was developed in three levels. An attempt was made to describe the functions so that they were as independent of materials types as possible. Included in these functions were some which related to internal operations, rather than service. These functions are associated with Selections and Acquisitions and Input Processing, functions 1 and 2 of Exhibit 8. The "Level of Service" incorporates those functions which interface with the user, functions 3, 4, and 5. Also included were two of the Selections sub-functions: Requirements Analysis and Selections Policy Development, for these have very direct bearing on service levels. (See Exhibit 8)

If Minimal, Intermediate, and Maximal Levels are assigned numerical values of 1, 2, and 3 respectively, it is possible to calculate an index which is the numerical average of those for the separate functions. The various functions can be weighted wherever it is

---

*Strable, Edward G., Editor, Special Libraries, a "Guide for Management." New York, Special Libraries Assoc., 1966.

1. Selections and Acquisitions
    - Selections
        - Requirements Analysis
        - Policy Development
        - Item Identification
        - Source Identification
    - Acquisitions
        - Order/Request/Claim
        - Order Transaction Records
        - Financial Records
2. Input Processing
    - Physical Processing
    - Tagging
        - Accession Numbering
        - Descriptive Cataloging
        - Subject Cataloging/Indexing
        - Classification
        - Abstracting
        - Preparation of Analytics
        - Catalog Maintenance
        - Catalog Authorities
3. Reference and Retrieval
    - Bibliographic Retrieval, all types
    - Prepare Bibliographies
    - SDI
4. Publication
    - Indexes
    - Abstract Bulletins
    - Evaluative Reviews
5. Circulation
    - Copy Fulfillment
    - Circulation Control

Exhibit 8. Library Function Groups Used in the Analysis

judged that certain functions are relatively more or less important than others. The complete expanded list of functions and their level descriptions can be found in Appendix A.

The purpose of developing the concept of Level of Service was to provide a way of assessing the library's subjective view of itself with respect to the service it provides. In some measure it provides the library's own evaluation of its mission requirements.

The input procurement and processing functions omitted from Level of Service are treated by a separate index, described in the next paragraph.

4. Index of Input Processing Functions - The Input Materials Work Function

The "level of service" function previously described has real meaning only with respect to those functions of the library that directly interface with the customer. These are in the categories Reference and Retrieval; Publication; and Circulation. The other functions, mostly of an input processing sort, have to do with what must be done to the input materials before the output functions can be effected. That is, input materials (of various types) must be cataloged, indexed, or abstracted before any corresponding products can be prepared.

The burden on the library, on the processing side, varies directly with what are deemed to be the necessary output products; and the total burden on the library input side similarly depends on the on the kinds of input materials from which the output products are to be created. The objective of the Index of Input Process functions is designed to account for

- the mix of input materials; and
- the level of processing and analytical treatment given these.

Although it is recognized that microform materials are becoming increasingly important, the index discussed here will confine itself to books and monographs, journals, and documents, as the three main input classes. The viewpoint taken is to express, in a relative way, the energy that must be devoted to a single "input unit" of various types, carried through a succession of process steps, finally yielding the material from which various products for the user (and, of course, for the librarian also) can be prepared. Two of the aggregate functions are considered: Selections and Acquisitions, and

Input Processing. The latter consists of both Physical Processing (of each input item) and Tagging (including descriptive and subject cataloging, and abstracting). In the materials breakdown are considered new book acquisitions, new document acquisitions, and both active journal subscriptions and the annual increase in that number.

The relative scales to be described here are natually arbitrary in many respects; for the data that could permit accurate estimates of the relative function-engeries dissipated as described are not well known. However, they are relevant quantities to a library operation and should be known as an essential part of systems design.

In Exhibit 9 the functions listed in the left hand column are generic in the sense that the analog to each - as named - has to be thought through with respect to each class of input material. For example, "Ordering" has to be interpreted as "Renewal" in applying it to "Active Journal Subscriptions." Each of the listed functions was set equal to 1 for new books, and the relative energy for each other type of material was estimated for that function. Following this the detailed functions for Acquisition were merged (averaged) and, taking Input Processing (Physical) as 1, the values for Selections, Acquisitions, and "Tagging" were estimated. These factors appear in Exhibit 10 in the column labeled "Normalizing Factor." These multipliers are applied to the rows of Exhibit 9. It should be noted that the normalizing factors for Component Tagging functions are the same as those for Non-Component Tagging. This is because the added energy for Component Tagging is accounted for in Exhibit 9, as 1 to 6 for books (Descriptive); 1 to 25 for active journal subscriptions; etc. It should further be noted that two classes of input material, Documents and New Journal Titles, are the same whether one speaks of Component or Non-Component Tagging. This is because the document is assumed to consist of but one component, while the new journal title relates to first issue and thereafter becomes an active journal subscription.

Several remarks are appropriate on the use of the work functions of Exhibit 10. Entries opposite given functions under Component Tagging are cumulative over the corresponding entries under Non-Component Tagging; but the functions within Non-Component Tagging are independent, as they are within Component Tagging. Thus if new books are given Subject Cataloging to the non-component level, while the salient chapters within the book are descriptively cataloged, the work function would be 36+12=48. If books were given descriptive cataloging, subject cataloging and abstracting (all for the entire book as a unit) the work function would be 6+12+20=38 (5 chapters plus book). Again, if books were given both component subject cataloging and component descriptive, the work function would be

		MATERIAL			
	INPUT FUNCTION	New Books b	Documents d	New Jour. Titles j	Active Jour. Sub. J
	Selections	1.0	1.2	1.5	0.2
	Ordering (Renewal)	1.0	0.4	1.2	0.2
	Receiving & Accessioning	1.0	0.2	0.6	10.0(1)
	Claiming	1.0	0.8	1.0	12.0(2)
	Avg - All Acq. Functions	1.0	0.53	0.93	7.5
	Input Process (Physical)	1.0	1.0(4)	0.2	1.4(3)
	Input Process (Tagging)				
Non-Component	Descr. Cataloging	1.0	0.6	1.0(6)	1.0(5)
	Subj. Cataloging/Indexing	1.0	1.0	1.0	0.0
	Abstracting	1.0	1.0	0.0	0.0
Component	Descr. Cataloging	6.0	0.6	1.0	25.0(7)
	Subj. Cataloging/Indexing	6.0	1.0	1.0	40.0(8)
	Abstracting	6.0	1.0	0.0	40.0(8)

Exhibit 9. Relative "Work Function" of Input Processing Functions

	INPUT FUNCTION	Normalizing Factor	MATERIAL			
			New Books (b/yr)	Documents (d/yr)	New Jour. Titles (j/yr)	Active Jour. Sub. J
	Selections	10	10.0	12.0	15.0	2.0
	Acquisitions	2	2.0	1.1	1.9	15.0
	Input Process. (Physical)	1	1.0	1.0	0.2	1.4
	Input Process. (Tagging)					
Non-Component	Descr. Cataloging	6	6.0	3.6	* 9.0	6.0
	Subj. Cataloging/Indexing	12	12.0	12.0	12.0	0.0
	Abstracting	20	20.0	20.0	0.0	0.0
Component	Descr. Cataloging	6	36.0	3.6	* 84.0	150.0
	Subj. Cataloging/Indexing	12	72.0	12.0	252.0	480.0
	Abstracting	20	120.0	20.0	400.0	800.0

*To make entries directly usable without reference to Active Journal Subs, Descriptive Cataloging entry from Exhibit 9, 1.0, has been multiplied by 6 (the normalizing factor) and 1/2 the corresponding Active Journal Sub has been added thereto. Thus, 1·6+1/2 (1·6)=9; 1·12+1/2 (0·12)=12. and 0·20+1/2 (0·20)=0. The three entries for component functions are obtained by adding to those for non-component, 1/2 the corresponding entries under Active Journal Sub, thus: 9+1/2(150)=84; 12+1/2(480)=252; and 0.0+1/2(800)=400.

Exhibit 10. Relative "Work Function" by Material Type and Function

36+72=108. Notice that the corresponding value for active journal subscriptions is 480+150=630 (10 issues/yr x 4 articles per issue).

As has been indicated there are numerous assumptions built into the development of the "Work Functions" of Exhibits 9 and 10. These are listed below and keyed to the items in Exhibit 9 as footnotes.

(1) Assumes receiving and checking functions for each journal issues as same as new book; and an average of 10 issues/yr/title.

(2) Assumes claiming of missing issue 20% worse per claim than book and 10 issues per year each with equal chance of a missing issue.

(3) Includes 0.4 for bindery preparation, and 1.0 for physical processing of bound volume.

(4) Physical processing of individual documents varies widely from almost none to elaborate rebinding. Average assumed = 1.

(5) Maintenance of Kardex = -.1 per issue, x 10 issues.

(6) First issue handling.

(7) (10 issues/subscription) x (4 articles/issue) x 0.6/article = 24.0; plus 1.0 for logging in 10 issues. Descriptive cataloging of article assumed same as document (i.e., 0.6)

(8) (4 articles/issue) x (10 issues/subscription) x 1/article = 40. Subject cataloging/indexing or abstracting for article assumed same as for document.

The purpose of the development of the Work Function concept is to examine whether Level of Service or Level of Automation relates to these systematically; and, if so, whether it is possible to infer the nature of input mix, or the class of service desired, that leads to automation steps. For this purpose one may examine for instance ratios such as (see Exhibit 9) total work involved in journals over the total for all input materials. If b, d, and j are the annual acquisition rates of books, documents and new journal titles, respectively, and W_k (b), W_1 (d), W_m (j) and W_m (J) represent the total work functions of each class of input material for which the highest process function is k, 1, or m:

$$R = [J\ W_m(J) + j\ W_m\ (j)] \div [b\ W_k(b) + d\ W_e(d) +$$

$$J\ W_m(J) + j\ W_m\ (j)]$$

Consider, for example, two libraries characterized as follows:

Library 1.	Selects, acquires, and processes in, 5,000 books which are given both descriptive and subject cataloging. Has 1,000 active journal subscriptions and acquires a net of 50 new journal titles per year which are given descriptive cataloging only.
Library 2.	Selects, acquires, and processes in, 1,000 books which are given both descriptive and subject cataloging. Has 1,000 active journal subscriptions, acquires a net of 50 new journal titles per year, and all these are given component subject indexing, as well as component descriptive cataloging.

Then Library 1 will have, as a proportion of its total input processing energies devoted to journals, the following:

$$R_1 = \frac{50(15+1.9+0.2+9) + 1,000\ (2+15.0+1.4+6.0)}{5000\ (10+2+1+6+12) + [\text{the numerator}]}$$

$$= \frac{1,305 + 24,400}{155,000 + 25,705} = \frac{25,705}{180,705},$$

$$R_1 = 0.142.$$

For Library 2,

$$R_2 = \frac{50\ (252+84+15+1.9+0.2) + 1,000\ (2+15+1.4+480+150)}{1,000\ (10+2+1+6+12) + [\text{the numerator}]}$$

$$R_2 = 0.956.$$

Thus Library 2 devotes 95.6% of its input processing energies to journals, primarily because of the component indexing, while the Library 1 only devotes 14.2% of its energies to journals. The disparity between journals and books is further widened because of Library 1 having five times the book acquisition rate as Library 2.

5. Identification of Variables

From the outset of the study there has been conviction that the trends in automation, if in fact trends do exist, would be associable with factors of two kinds: Technical Factors which relate to properties of the Library or Information Center, and Administrative Factors (organizational location, control, budget, staff, etc.). Also there has been a continuous speculation as to which factors would turn out to be of significance in shaping trends.

The problem is obviously a very complex one, with literally dozens of factors, and hundreds of possible combinations. The purpose of this section is to identify major variables, and to pose a set of questions or hypotheses that may be illuminated by the subsequent analysis.

a. Dependency and Independence

It must be noted that a study of the complexity of this, dealing as it does with partially "sociological" rather than mechanistic factors must be approached from a description and classification basis. That is, from a phenomenological viewpoint. Even in cases where the problem is characterized by well known populations, good sampling, and accurate data, caution must be exercised in the assignment of causal relationships among variables. Statistical inference says only that there is a non-ignorable co-occurence of phenomena; it does not specify the cause. No one believes that stork population has anything to do with human birth rates. It must not even be assumed that the two phenomena depend on the same variable. The point is that dependency (in the mathematical/physical sense) cannot be assumed in situations such as this; statistical coexistence of phenomena must be supplemented by a large measure of astute rationalization. In this study we have a measure of level of automation (based on observations) for which strong association may be found with technical and administrative factors (also observed) of the library. We first seek to identify all such factors as may be relevant; we then, by hypothesis, make certain statements regarding the kinds of relationships that may reasonably exist; and we then examine the data for those factors to see whether the hypotheses are or are not contradicted.

b. Factors to be Examined

There are two classes (not totally distinct) of factors which have been said to be of interest to this study: technical factors that describe the library, and administrative factors that describe the constraints under which the library operates. In the following these are listed with only brief amplifying statements as necessary.

ADMINISTRATIVE FACTORS - Agency Level

(1) Mission Class (Regulatory, R&D, External Service Interface, or Support)

(2) Existence of explicit mission to disseminate information.

(3) Size and budget.

(4) Organizational location of library and relationship (e.g., administrative support or operational)

(5) Geographical distribution of operating components of the agency.

(6) Presence of formalized operational planning processes that include the libraries.

ADMINISTRATIVE FACTORS - Library Level

(1) Total Budget.

(2) Planning Processes: local responsibility for establishing operational requirements, and development of implementation plans.

(3) Staff: number, training, experience, and GS levels.

(4) Age of Library.

TECHNICAL FACTORS - Library Level

(1) Size and composition of holdings by subject area.

(2) Size and composition of holdings by materials types.

(3) Rates of growth of collection by materials types.

(4) Distribution of users by professional disciplines and geographical location.

(5) Proportion of active users to agency staff size.

(6) Output traffic: Reference and Circulation.

(7) Services offered and services required.

C. Data Collection Tools and Procedures

The gathering of data, as has been indicated, had two points of focus: one at the Head Librarian level to elicit the technical details of of the library plus a local view of the administrative situation of the library, and the second at a higher (one or two echelons) level to provide an administrative overview of the library. Correspondingly it was necessary to develop two interview guides, and two interview records. These, along with general interview procedures are discussed below.

1. Interview Guides and Records

For the preliminary interviews the candidates for interview were sent copies of guides which were identical with those subsequently used by the interviewers for recording information. Serving the dual purpose as it did, the guide/interview record was long and, to the selected individual, very overwhelming. Accordingly, for the subsequent main data collection effort the guide was condensed and separated from the interview record, and sent to the candidate prior to the conversation to provide him with the scope of material that was to be covered. This gave him an opportunity also to gather information in advance that he considered relevant, but to do it in his own way.

a. Guide for Administrative Interviews

This guide covered five areas in which it was desired to gather information:

(1) Agency mission and organizational structure;

(2) Administrative relationships;

(3) Responsibilities of the agency in regard to information activities;

(4) Planning processes, especially as related to information activities; and

(5) Future plans related to information activities.

This guide for the administrative interview is included in its entirety in App. A, Section III A.

b. Administrative Interview Record

Appendix A, Section III B. presents the entire record for the administrative interview in a physically condensed version. As much white space as possible has been eliminated, but the detailed questions are complete. The sections in the interview record are keyed by number (such as Step 1. a., b, etc.) to the corresponding Step and subsection in the guide.

c. Technical Interview Guide

The same rationale as described for the administrative interview was applied also to the technical interview. The guide covered six subjects:

(1) Library internal organization, staffing and budgeting;

(2) Relationships of the library to management, ADP services, and library users;

(3) Characterization of the library's operations and collection;

(4) Past operational problems and planning processes;

(5) Future plans; and

(6) General comments.

This guide is shown in Appendix A, Section III C.

d. Technical Interview Record

The Technical Interview Record is included in Appendix A, Section III D, in a physically condensed form. Once again the detailed questions of the Record are keyed by number to the subjects indicated in the Guide.

2. Interview Procedures

The procedures which finally evolved were developed during the preliminary interviews and further refined as the interviews progressed.

The preliminary set of interviews were most valuable, both for pointing up deficiencies in the Guide/Record then in use, and demonstrating a real need for the advance determination of the correct organizational point of contact, and the correct individual. The deficiencies in the Guide/Record have already been mentioned and the steps taken to eliminate them. The second problem led to a revision of the approach to involve searching out, particularly in connection with the administrative interviews, the proper individual and point of contact by telephone, discussing the project and scope of the desired conversation, and setting the date for the interview. This proved to be far more efficient than attempting to request the interview by letter, and allowed greater flexibility in scheduling.

The major steps in the interview procedure were as follows:

- Preliminary homework on the agency in which the interviews were desired, to learn what major information activities were going on, and where they were located organizationally.

- Telephone calls to identify the correct point of contact and confirm names, locations and responsibilities of the individuals. When the correct person (the one with such responsibilities that he would have the desired information) was identified, the scope of the planned conversation was discussed, and a date and time set for the interview.

- Detailed homework on the agency (for administrative interviews) or on the library (for technical interviews). This involves gathering information from the literature and in some case actually attempting to fill in the Interview Record in advance.

- Interview. Usually two persons made up the interview team. One was the principal interrogator, while the second served to cover any omissions, to keep the conversation on the subject, and to record any data not allowed for in the Record. The interview was always closed by asking who the respondent would recommend for call-back for any further details.

- Call-back. In most cases it was necessary to make one or more call-backs to each agency to obtain confirmation of some items of recorded data, or to get additional details.

III DATA COLLECTION

Data collection for the project was divided into two portions, a set of nine preliminary interviews, followed by a period during which both the selection tools and interview procedures were revised and refined, and a period where the main group of libraries was visited.

A. Selection of Agencies and Libraries

As described elsewhere the agencies selected for study were obtained by a classification process, which grouped the agencies by mission category. Those selected were chosen from the Executive Departments and large Independent Agencies, for it is in these that most of the major library activities are found.

1. Agencies Selected

The chart shown as Exhibit 11 is the same format as those of Exhibits 2-5, showing the classification of agencies by mission type. However, in Exhibit 11 only those agencies which were selected for study are designated. The Executive Departments and Independent Agencies are shown merged in a single display.

As is clear, when the subordinate components of large agencies are classified by the same scheme (See II B. 1.), these may belong to different classes than the parent. The redistribution of the actual elements interviewed is shown in Exhibit 12, yielding a much greater scatter than that previously shown.

2. Summary of Interviews

A total of fifty points of contact were established and interviews conducted during the study. These points of contact covered both the libraries and administrative offices with responsibility for the libraries. Eleven Executive Departments were covered (counting the armed services separately) and four Independent Agencies. The particular offices contacted and interviewed, and the dates of these interviews are listed in Exhibit 13.

B. Case Studies and Reports

1. Objectives

The objectives of each case study were two-fold:

		SECONDARY FUNCTION							
		EI		RD		REG		SPT	
		ED	IA	ED	IA	ED	IA	ED	IA
PRIMARY FUNCTION	EI		VA	HUD HEW USDC		USDI USDA			
	RD		AEC NASA						
	REG	DOD: ARMY NAVY A/F DOT	FCC					USDT	
	SPT								

ED-Exec. Dept.; IA-Indep. Agency

Exhibit 11. Mission Classification of Agencies Studied

		SECONDARY FUNCTION							
		EI		RD		REG		SPT	
		ED	IA	ED	IA	ED	IA	ED	IA
PRIMARY FUNCTION	EI		VA	HUD		USDI NAL PIC			
	RD	NIH NBS USGS	AEC USBM	DDRE USA-OCRD USA-MERDC USA-Ft. Det. USA-HDL UDA-CRDL USN-ONR USN-NRL USN-NWL USN-NOL USAF-OAR NIMH CPRC	GSFC			ESSA	STID
	REG	DOT BPR FAA	FCC	FDA				IRS RIRA	
	SPT								

ED-Exec. Dept.; IA-Indep. Agency

Exhibit 12. Mission Classification of Agency Components Visited

Element	Office Visited	Date(s) of Contact
	I DEPARTMENT OF INTERIOR	
Headquarters, Washington, D. C.	Office of Management Research	8/20/68
	Office of Library Services	8/29/68 9/16/68
	Office of the Science Adviser	11/7/68
Bureau of Mines Metallurgical Research Center College Park, Md.	Library	9/10/68
	Office of the Director	9/17/68
Geological Survey Washington, D. C.	Library	11/13/68
	Office of Technical Reports	11/14/68
	II DEPARTMENT OF TRANSPORTATION	
Headquarters, Washington, D. C.	Office of Management Systems	11/15/68
Federal Aviation Administration Washington, D. C.	Administrative Standards Division	9/9/68
	Library Services Div	9/27/68
Bureau of Public Roads Div of Research & Devel. Washington, D. C.	Library	9/18/68
	Program Coordination	9/24/68

Exhibit 13. List of Agencies and Interview Points of Contact

Element	Office Visited	Date(s) of Contact
	III DEPARTMENT OF DEFENSE	
DDR&E Washington, D. C.	Directorate of Technical Information	1/18/69
	IV DEPARTMENT OF THE ARMY	
Office Chief of Research & Devel. Washington, D. C.	Data Management Division	1/28/69
Adjutant Generals Office Education and Morale Support Directorate Ft. McNair Washington, D. C.	Library Information Systems Branch	1/29/69
Army Materiel Command Mobility Equipment R&D Center Ft. Belvoir, Va.	Technical Information Division	12/2/68
Army Materiel Command Harry Diamond Labs. Washington, D. C.	Technical Information Office	12/3/68
Army Chemical Center Edgewood Arsenal Edgewood, Md.	Technical Library	12/5/68
Army Biological Labs Ft. Detrick, Md.	Technical Information Division	12/11/68

Exhibit 13. List of Agencies and Interview Points of Contact (cont'd)

Element	Office Visited	Date(s) of Contact
	V DEPARTMENT OF THE NAVY	
Office of Naval Research Washington, D. C.	Directorate of Research	12/4/68 3/6/69
Naval Ordnance Lab White Oak, Md.	Library Division	11/25/68
Naval Weapons Lab Dahlgren, Va.	Technical Library Branch	11/26/68
Naval Research Lab Washington, D. C.	Library	12/10/68
Naval Ship Systems Command Washington, D. C.	Scientific Documentation Division	3/6/69
	VI DEPARTMENT OF THE AIR FORCE	
Office of Aerospace Research Washington, D. C.	Office of Scientific & Technical Information	12/13/68
DCS Personnel Randolph AFB San Antonio, Texas	USAF Library Services	3/31/69
	VII HOUSING & URBAN DEVELOPMENT	
Headquarters Washington, D. C.	Office of General Services	3/21/69
	Library	3/10/69

Exhibit 13. List of Agencies and Interview Points of Contact (cont'd)

Element	Office Visited	Date(s) of Contact
VIII HEALTH, EDUCATION & WELFARE		
National Institutes of Health Bethesda, Md.	Library Branch	6/9/69
Food & Drug Administration Washington, D. C.	Library	2/20/69
	Science Information Facility	3/20/69
National Institute of Mental Health Bethesda, Md.	National Center for Mental Health Information	2/27/69
	NCMHI Technical Information Section	2/25/69
IX DEPARTMENT OF COMMERCE		
Environmental Sciences Services Admin. Rockville, Md.	Libraries Branch	12/12/68
	Science Information & Documentation Div.	12/12/68
National Bureau of Standards Gaithersburg, Md.	Library Division	12/16/68
X DEPARTMENT OF AGRICULTURE		
National Agricultural Library Washington, D. C.	Office of the Director	3/3/69
	Pesticides Information Center	3/6/69

Exhibit 13. List of Agencies and Interview Points of Contact (cont'd)

Element	Office Visited	Date(s) of Contact
	XI DEPARTMENT OF THE TREASURY	
Internal Revenue Service Washington, D. C.	Operations and Planning Division	3/11/69
	Reports & Information Retrieval Activity (RIRA)	3/25/69
	XII NATIONAL AERONAUTICS & SPACE ADMIN.	
Headquarters, Washington, D. C.	Scientific and Technical Information Division	3/19/69
Goddard Space Flight Center Greenbelt, Md.	Technical Information Division	3/18/69
	Library Branch	3/14/69
	XIII ATOMIC ENERGY COMMISSION	
Headquarters Bethesda, Md.	Technical Information Division	3/7/69
	Library Germantown, Md.	3/18/69
	XIV VETERANS ADMINISTRATION	
Dept. of Med. and Surgery Washington, D. C.	Data Management Liaison Staff	9/23/68
	Libraries Division	9/12/68 9/17/68
	XV FEDERAL COMMUNICATIONS COMMISSION	
Headquarters, Washington, D. C.	Library Division	12/6/68
	Sec. of the Comm.	12/6/68

Exhibit 13. List of Agencies and Interview Points of Contact (cont'd)

- To study the particular library (or information center) from a technical point of view to establish information on holdings, services, users, and usage rates; automation developments and plans therefore; and the local library administrative processes.

- To learn from administrators above the library the context in which the library sits, and the constraints imposed thereby, particularly as regards automation development activity.

Accordingly the report of each library contains a comprehensive discussion of the agency, its organization, mission and activities - all from an operational point of view - together with a picture of administrative relationships that affect the library. The report further contains a discussion of library administrative factors (usually obtained on interview from a different individual) covering some questions in parallel with the higher administrative picture. Technical aspects of the library are covered in as great depth as the information warrants.

2. Outlines of Case Study Reports

The reports were compiled so that one volume covered an entire Executive Department, wherever interviews had been conducted both at department and subordinate component levels. Thus there was a summary report on the department, reinforced by an appendix for each component visited. There were two exceptions to this: Commerce, where no interviews were held at department level (it covered only NBS and ESSA) and Defense, where the armed services were treated as departments by themselves. Independent Agencies were treated in much the same fashion, depending on the scope of visits within the agency.

The organization of information for the Case Reports is shown in the outlines presented as Exhibits 14 and 15. The first (Exhibit 14) is the general outline for Departmental Case Study Reports, and covers the contextual information; the second (Exhibit 15) is used for each appendix which covered a major subordinate component. For an Independent Agency the report followed the outline of Exhibit 15.

I. INTRODUCTION

II. DEPARTMENTAL (AGENCY) REVIEW

- A. Mission and Organization
- B. Departmental Management and Administration
  - 1. Relationships
  - 2. Planning, Programming & Budgeting (with particular reference to information activities)
- C. Departmental Operations
  - 1. Functions and Responsibilities
  - 2. Geographical Distribution

III. DISCUSSION OF DEPARTMENTAL (AGENCY) INFORMATION ACTIVITIES

- A. Purposes Related to Mission
- B. History of Development of Libraries and Information Centers
- C. Current Status of Information Activities
  - 1. Characterization (Numbers, Types and Purposes)
  - 2. Personnel and Funding
  - 3. Inter-relationships
  - 4. Automation
- D. Future Plans and Programs

Exhibit 14. General Outline for Departmental Case Study Reports

I. BACKGROUND AND INTRODUCTION

II. ADMINISTRATIVE FRAMEWORK OF THE PARENT ORGANIZATION

- A. Structure and Mission of the Parent Organization

- B. Administrative Relationships

    1. Of the Parent to Higher Headquarters
    2. Of the Parent to Subordinate Elements
    3. To External Agencies or Activities
    4. Within Parent

- C. Planning Mechanism

    1. For Information Activities
    2. Budgeting and Staffing
    3. For Automation Programs

- D. Future Plans

    1. Basis of Plans
    2. Activities or Groups Affected
    3. Funding Requirements
    4. Objectives

III. REVIEW OF LIBRARY (OR INFORMATION CENTER) OPERATIONS

- A. Introduction

- B. Library Organization, Staffing, and Funding

    1. Internal Organization
    2. Functional Distribution
    3. Staffing
    4. Library Funding

Exhibit 15. Outline for Appendices to Case Study Reports

C. Library Operational Relationships

  1. Relationships with Elements which Support the Library (e.g., Data Processing)
  2. Relationships with other Intra-Agency Libraries or Information Activities
  3. Relationships with other Federal Libraries
  4. Relationships with Non-Government Libraries, or with General Public
  5. Relationships with Users

D. Library Services

  1. Services Offered
  2. Levels of Activity
  3. Anticipated Changes in Scope of Service and Levels of Activity

E. Present Status of the Library (Information Center)

  1. Characteristics of the Collection
     Size/Subject Coverage/Types of Material
  2. Status of Automation by Library Function

F. Analysis and Planning Functions

  1. Internal Operating Functions (e.g., selections acquisitions, etc.)
  2. Services and Products
  3. Automation of Library Functions
  4. Staffing and Budgeting
  5. Program Evaluation

G. Summary of Future Plans

Exhibit 15. Outline for Appendices to Case Study Reports
(cont'd)

3. Case Reports Produced During the Project

The project produced a total of fourteen case studies covering the interview activities listed in Exhibit 13. Two planned reports were not delivered for various reasons. The descriptive listing of all these is provided in Exhibit 16.

R-8709(CR-1)		U.S. Department of Interior
	Appendix A	U.S. Department of Interior Headquarters Library
	Appendix B	U.S. Bureau of Mines
	Appendix C	U.S. Geological Survey
R-8709(CR-2)		U.S. Department of Transportation
	Appendix A	Federal Aviation Administration
	Appendix B	U.S. Bureau of Public Roads
R-8709(CR-3)		Federal Communications Commission
R-8709(CR-4)		The Environmental Science Services Administration
R-8709CR-5)		The National Bureau of Standards
R-8709(CR-7)		The Department of Defense; Defense Director of Research and Engineering
R-8709(CR-8)		U.S. Department of Army
	Appendix A	Mobility Equipment Research and Development Center, Fort Belvoir, Va.
	Appendix B	U.S. Army Materiel Command, Harry Diamond Laboratories
	Appendix C	U.S. Army Edgewood Arsenal, Edgewood, Md.
	Appendix D	U.S. Army Biological Laboratories, Fort Detrick, Md.
R-8709(CR-9)		U.S. Department of the Navy
	Appendix A	Naval Weapons Laboratory
	Appendix B	Navy Ordnance Laboratory
	Appendix C	Naval Research Laboratory

Exhibit 16. Listing of Case Reports

R-8709(CR-11)		Internal Revenue Service
	Appendix A	Reports and Information Retrieval Activity (RIRA)
R-8709(CR-12)		U.S. Department of Health, Education, and Welfare
	Appendix A	Food and Drug Administration
	Appendix B	National Clearinghouse for Mental Health Information
R-8709(CR-13)		U.S. Department of Agriculture
	Appendix A	The National Agricultural Library
	Appendix B	The Pesticides Information Center
R-8709(CR-14)		The National Aeronautics and Space Administration
	Appendix A	Goddard Space Flight Center
	Appendix B	The Scientific and Technical Information Facility
R-8709(CR-15)		The Atomic Energy Commission
R-8709(CR-16)		Department of Housing and Urban Development

Exhibit 16. Listing of Case Reports (cont'd)

IV. DATA REDUCTION AND ANALYSIS

A. Data Reduction

All raw data gathered in the course of this project have been organized into a common format for presentation. These include the responses to administrative questions at both library level and higher along with the technical data about the individual libraries. These are found in the section designated "Data Summaries" in Appendix B.

The data reduction processes included making many estimates to fill gaps in information obtained from interview, or to convert the information to common form. This study, as have all its predecessors, has fallen prey to the paucity of reliable data that characterize the technical aspects of libraries; statistical data, if they are kept at all, are usually kept at the convenience of, and to serve the limited purposes of, library managers, and fall woefully short in both uniformity and completeness for purposes of thorough analysis.

Much of the data are brought forward to this section of the report for easy perusal. In addition many quantities have been calculated for the exploration of relationships; and these are also presented in the main body. The following is a listing of the tables and the material they contain. In most cases the quantities have been given letter designations which are defined in the column headings. These designations will be freely used in later discussions without further explanation. Many entries in the tables will be found in parentheses ( ), or will be labeled with an asterisk (*). The former symbol means that the number was estimated by the present investigators; the latter indicates that either the number or an estimate was taken from either Kruzas * or "Survey of Special Libraries" **. Such data are at least two years old, and in some cases have been adjusted to allow for change over that time.

The summary data presented here are as follows:

Exhibit 17. Holdings (H) and Annual Growth (G) for the Collections of the Libraries Surveyed.

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*"Directory of Special Libraries and Information Centers," Anthony J. Kruzas (Editor), Gale Research Company, 1968.

**"Survey of Special Libraries Serving the Federal Government," Office of Education, 1968.

No.	Library		Books	Bd. Per.	Docs.	Journals (Active Subs)	Microform	
							Doc.	Jour.
1	USDI/HQ	H	436,000	285,000	10,000	7,500	0	0
		G	4,800	3,200	2,000	1,000	0	0
2	USGS/HQ	H	← 420,000 →		120,000	5,000	0	0
		G	← 10,000 →		12,000	100	0	0
3	USBM/CPRC	H	8,502	4,548	800	(200)	0	0
		G	300	200	90	-	0	0
4	DOT-FAA/HQ	H	55,000	10,740	27,900	808	1,650(R)	0
		H					40,000(F)	0
		G	2,000	-	300	340	-	-
5	DOT-BPR/HQ	H	183,700	13,600	94,400	682	0	0
		G	(700)	(300)	(8,600)	(50)	0	0
6	USA-MERDC	H	15,000	2,000	100,000	750	0	0
		G	3,800	480	14,900	50	0	0
7	USA-Ft. Detrick	H	50,000	25,000	47,000	1,100	0	0
		G	875	350	4,000	15	0	0
8	USA-HDL	H	25,000	9,000	138,600	734	0	0
		G	2,000	1,070	12,500	20	0	0
9	USA-Edgewood Arsenal	H	35,000	15,000	360,000	100	← 60,000 →	
		G	2,400	100	(35,000)	20	← 24,000 →	
10	USN-NRL	H	35,000	65,000	350,000	2,000	40,000(F)	0
		G	2,400	2,400	24,000	(80)	18,000(F)	0

Exhibit 17. Holdings (H) and Annual Growth (G) for the Collections of the Libraries Surveyed

No.	Library		Books	Bd. Per.	Docs.	Journals (Active Subs)	Microform	
							Doc.	Jour.
11	USN-NWL	H	27, 500	3, 500	85, 000	750	75, 000(F)	0
		G	2, 500	400	(22, 500)	50	25, 000(F)	0
12	USN-NOL	H	37, 000	9, 000	238, 000	1, 000	60, 000(F)	0
		H					100, 000(R)	0
		G	1, 000	200	11, 100	50	16, 000(F)	0
		G					20, 000(R)	0
13	USDC-NBS	H	← 125, 000 →		15, 000	3, 000	0	0
		G	← 980 →		(1, 500)	-	0	0
14	USDC-ESSA/ASL	H	← 175, 000 →			457	0	0
		G	← 5, 000 →			-	0	0
15	USDC-ESSA/GSL	H	← 145, 000 →			500	0	0
		G	← 4, 000 →			-	0	0
16	USDC-ESSA/BLL	H	42, 000	13, 000	70, 000	1, 800	70, 000(F)	0
		G	2, 680	-	36, 000	68	26, 000(F)	0
17	HEW-NIH/HQ	H	30, 000	65, 000	0	2, 800	0	4, 500(F)
		G	-	-	-	-	-	-
18	HEW-FDA/HQ	H	8, 940	5, 850	100	1, 100	0	457 vol(C)
		H						231 vol(R)
		G	2, 300	-	-	60	0	-
19	HEW-NIMH/NCMHI	H	0	0	0	1, 200	0	0
		G	0	0	0	-	0	0

Exhibit 17. Holdings (H) and Annual Growth (G) for the Collections of the Libraries Surveyed (cont'd)

No.	Library		Books	Bd. Per.	Docs.	Journals (Active Subs)	Microform Doc.	Microform Jour.
20	USDA-NAL	H	← 1,300,000 →		0	22,000	0	0
		G	← 17,000 →		0	-	0	0
21	USDA-NAL/PIC	H	0	0	2,000	55,000	0	0
		G	0	0	150	42,000	0	0
22	USDT-IRS/HQ	H	← 50,000 →		-	2,400	0	0
		G	← 2,400 →		-	-	0	0
23	USDT-IRS/RIRA	H	0	0	65,000	0	0	0
		G	0	0	14,000	0	0	0
24	HUD/HQ	H	← 400,000 →			1,200	0	0
		G	← 31,000 →			-	0	0
25	AEC/HQ	H	20,000	-	16,500	1,620	-	0
		G	2,300	-	6,400	60	6,400(F)	0
26	NASA-STID/STIF	H	0	0	256,831	170,921	335,888(F)	0
		H					200,000(F)	
		G	0	0	51,500	34,000	55,000(F)	0
27	NASA-GSFC	H	50,000	30,000	20,000	2,000	200,000(F)	0
		G	3,500	-	3,500	100	(4,000F)	0
28	FCC/HQ	H	← 28,000 →		-	128	0	0
		G	← 450 →		-	-	0	0

Exhibit 17. Holdings (H) and Annual Growth (G) for the Collections of the Libraries Surveyed (cont'd)

This Exhibit gives, in the rows labeled "H" for each of the 28 libraries or information centers, the numbers of volumes of books or monographs (B), Bound Periodical volumes (BP), Documents (D), Documents in Microform (M/D) and Journals in Microform (M/J). Each entry under the last two headings is labeled with an F (microfiche), R (roll) or C (cartridge) as necessary. Exhibit 17 also gives annual growth rates of collections (G) for books and monographs (b); Bound Periodical volumes (bp); Journals, Active Subscriptions (J), net number of new journal titles subscribed per year (j); Documents (d), and Microform (m/D or m/J).

Exhibit 18. Aggregated Administrative Factors.

In this Exhibit are presented four factors, designated F_1, F_2, F_3, and F_4. These are derived from groups of binary (yes/no) questions which were assimilated from the interview data, and so arranged that intuitively a large proportion of YES answers would tend to favor automation. These binary question groups relate primarily to administrative matters, both within the library and without, and to the structure of the parent agency. The question groups are listed below.

F_1. Control and Coordination Factors

1. Small agency
2. Few sub-elements
3. Low dispersion of sub-elements
4. Strong central control
5. Strong internal coordination
6. Large subject overlap among sub-elements

F_2. Budget Factors

1. Agency has explicit information mission
2. Library is line-item in parent budget
3. Library is line-item in agency budget
4. Library budget is "adequate"
5. Library budget is "large"

F_3. Library Organizational Attachment

1. Library administrator has dual line and staff responsibilities

2(a) RD element in line attachment (Score 1)

(b) RD element in staff (Score 2/3)

(c) Administrative element in staff (Score 1/3)

(d) Administrative element in line attachment (Score 0)

3. An agency-wide information planning body exists

4. Agency participates in government-wide information planning body

5. Strong external operational coordination necessary (to agency)

6. Large external subject overlap (agency with other)

F_4. Internal Library Administrative Factors

1. In-library capability for Planning/Feasibility studies

2. In-library capability for R&D studies

3. Library staff is at "adequate" total strength

4. Library staff training and experience level is satisfactory

Each of the questions in the four groups is answered with a 1 for yes and 0 for no, giving maximum possible scores, for each of the four groups, of 6, 5, 6, and 4. These are all normalized to a base of 10, so finally all range from zero to 10. The normalized scores for the 28 libraries surveyed are given in Exhibit 18, along with the primary and secondary missions of the significant parent institution.

Agency/Library	Primary/ Secondary Mission	Aggregated Factors			
		Agency (F_1)	Budget (F_2)	Organization (F_3)	Lib. Admin. (F_4)
1 USDI/HQ	EI/REG	3.33	8	8.33	7.5
2 -USGS/HQ	RD/EI	1.67	8	7.78	2.5
3 -USBM/CPRC	RD/RD	6.67	4	2.22	5.0
4 DOT-FAA/HQ	REG/EI	3.33	4	6.67	7.5
5 -BPR/HQ	REG/EI	5.00	4	4.45	2.5
6 USA-MERDC	RD/RD	8.33	8	5.00	7.5
7 -Ft. Detrick	RD/RD	8.33	6	10.00	7.5
8 -HDL	RD/RD	8.33	4	6.67	5.0
9 -CRDL	RD/RD	8.33	8	8.33	2.5
10 NAVY-NRL	RD/RD	8.33	10	6.67	10.0
11 -NWL	RD/RD	8.33	8	5.00	7.5
12 -NOL	RD/RD	8.33	8	5.00	7.5
13 USDC-NBS	RD/EI	5.00	8	3.33	7.5
14 -ESSA/ASL	RD/SPT	6.67	6	7.22	7.5
15 -ESSA/GSL	RD/SPT	6.67	6	7.22	7.5
16 -ESSA/BLL	RD/SPT	6.67	-	-	7.5
17 HEW/NIH/HQ	RD/EI	-	-	-	-
18 -FDA/HQ	REG/RD	6.67	2	5.00	2.5
19 -NIMH/NCMHI	EI/RD	1.67	10	4.00	5.0
20 USDA-NAL	EI/RD	1.67	10	10.00	7.5
21 -NAL/PIC	EI/RD	1.67	6	10.00	7.5
22 USDT-IRS/HQ	REG/SPT	5.00	4	7.22	2.5
23 -IRS/RIRA	REG/SPT	5.00	4	7.22	10.0
24 HUD/HQ	EI/RD	3.33	4	3.33	7.5
25 AEC/HQ	RD/EI	3.33	2	8.33	7.5
26 NASA/STID	RD/EI	5.00	10	8.00	10.0
27 -GSFC	RD/RD	6.67	8	6.67	7.5
28 FCC/HQ	REG/EI	5.00	0	6.67	5.0

Exhibit 18. Aggregated Administrative Factors

Exhibit 19. Budget Data on Agencies and the Libraries

This Exhibit presents information on employment and budget of the agencies where the 28 libraries are found, and for each library (where known) the age, and budget.

Exhibit 20. Staff Levels and Training

The data gathered from the survey relating to staffing and experience and ADP training of the library staff are presented in Exhibit 20 for each of the 28 libraries. Usually Civil Service grade levels were not available, and accordingly are not included in this tabulation. However, where it is available, such data can be found in the Data Summaries of Appendix B. The chart provides data on total staff, breakdown by professional category where possible, and the numbers of the staff who have had various levels of ADP training. Training is given in three levels: None, Informal (which includes OJT or exposure to ADP but no formal training, and finally Formal). Only a range from lowest to highest is given for years of experience. Some further details on all these questions can be found in the Data Summaries of Appendix B.

Exhibit 21. The Library Users

This Exhibit contains some information on the size of the user population, both active and potential. These estimates were usually obtained directly from individuals interviewed, but in some case were estimates arrived at during the analysis. The next column provides an overall estimate of circulation, while the last shows the principal discipline of the user community.

Exhibit 22. Calculated Measures for Library Automation

As explained in Section II-Methodology three measures were developed for library automation, Level of Service, Level of Equipment, and Level of Integration. The methods of their calculation have already been described. These are designated in Exhibit 22 as S, E, and I, respectively. All measures, except that for equipment have been normalized to a range of 10. Also included are the primary and secondary mission assignments for the agencies.

No.	Library	Agency Size (1000's)	Agency Budget (1000's)	Age of Library (yrs)	Library Budget (1000's)
1	USDI (HQ)	60.9	474,573	119	1,058.0
2	USGS (HQ)	8.4	97,228	90	569.9
3	USBM (CPRC)	0.13	1,750	26	24.5
4	DOT-FAA (HQ)	53.2	1,271,500	41	368.0
5	-BPR (HQ)	5.4	~4,000,000	67	113.0
6	ARMY-MERDC	1.4	-	27	300.0
7	-Ft. Detrick	2.5	690,326	26	236.1
8	-HDL	(1.4)	-	>16	-
9	-Edgewood	(3.0)	-	(40)	-
10	NAVY-NRL	3.5	-	42	600.0
11	-NWL	2.0	-	16	(190.0)
12	-NOL	3.1	-	28	-
13	USDC-NBS	3.7	-	67	261.7
14	-ESSA(ASL)	7.7	176,756	99	-
15	-ESSA(GSL)	7.7	176,756	129	-
16	-ESSA(BLL)	7.7	-	18	119.9
17	HEW-NIH	12.2	1,499,449	66	-
18	-FDA	4.3	72,698	8	275.0
19	-NIMH(NCMHI)	2.9	377,299	7	(610.0)
20	USDA-NAL	86.4	7,402,306	107	3,227.0
21	-NAL(PIC)	86.4	7,402,306	4	295.0
22	USDT-IRS	66.7	1,026,055	52	36.1
23	-IRS(RIRA)	66.7	1,026,055	6	-
24	HUD	16.8	2,928,000	35	-
25	AEC	7.7	2,438,135	22	360.5
26	NASA-STID	32.7	3,237,600	52	5,000.0
27	-GSFC	(5.0)	-	9	(400.0)
28	FCC	1.6	23,934	35	(50.0)

Exhibit 19. Budget Data on Agencies and Their Libraries

No.	Library	Total Staff	Professional Breakdown			ADP Training			Years Experience (Range)
			1410	1412	Other	None	Formal	Informal	
1	USDI (HQ)	(40)	-	-	-	3	5	5	1→ 25
2	USGS (HQ)	67	-	-	-	4	1	4	1→33
3	USBM (CPRC)	2	1	-	-	2	-	-	2→20
4	DOT-FAA (HQ)	28	10	-	-	1	2	7	6→25
5	-BPR (HQ)	11	9	-	-	-	-	-	-
6	ARMY-MERDC	22	3	15	-	2	0	3	-
7	-Ft. Detrick	13	10	2	-	-	1	2	> 8
8	-HDL	7	1	-	-	2	3	-	18→25
9	-Edgewood	22	5	1	-	2	3	1	3→28
10	NAVY-NRL	44	6	-	8	2	1	1	6→22
11	-NWL	16	3	1	-	-	3	1	2→20
12	-NOL	26	13	-	-	1	1	3	12→20
13	USDC-NBS	18	5	-	-	2	-	2	6→20
14	-ESSA (ASL)	21*	3	-	-	2	1	2	10→47
15	-ESSA (GSL)	10*	4	-	-	-	1	3	12→25
16	-ESSA (BLL)	14	6	2	-	-	-	1	-
17	HEW-NIH	54	22	6	-	-	-	-	-
18	-FDA	10	10	1	-	5	-	2	-
19	-NIMH(NCMHI)	24	-	1	13	1	1	2	2→16

Exhibit 20. Professional Staff, Education, Experience, and ADP Training

No.	Library	Total Staff	Professional Breakdown 1410	1412	Other	ADP Training None	Formal	Informal	Years Experience (Range)
20	USDA-NAL	170	-	-	-	-	-	-	-
21	-NAL (PIC)	10	2	3	-	-	1	4	2→17
22	USDT-IRS	5	3	-	-	5	-	-	-
23	-IRS (RIRA)	6	-	-	-	-	2	3	-
24	HUD	27	18	-	-	-	5	3	4→28
25	AEC	20	15	-	-	-	2	3	3→16
26	NASA-STID	56+ contr.	-	-	-	-	-	-	-
27	-GSFC	26	9	-	-	-	-	3	1→10
28	FCC	5	2	-	-	5	-	-	12→31
	* FY '66								

Exhibit 20. Professional Staff, Education, Experience, and ADP Training (cont'd)

No.	Library	No. Active Users	Major Professional Discipline	Circ.
1	USDI (HQ)	-	Scientists & Engineers	24,685
2	USGS (HQ)	2,000	" "	105,000
3	USBM (CPRC)	104	" "	9,134
4	DOT-FAA (HQ)	2,000	" "	> 14,000
5	-BPR (HQ)	3,000	" "	28,440
6	ARMY-MERDC	2,500	" "	31,800
7	-Ft. Detrick	250	Admin. and Mgmt.	19,400
8	-HDL	1,100	Scientists & Engineers	-
9	-Edgewood	1,250	" "	65,200
10	NAVY-NRL	1,800	" "	103,200
11	-NWL	1,400	" "	50,000
12	-NOL	1,500	" "	219,550
13	USDC-NBS	1,050	" "	24,000
14	-ESSA (ASL)	1,000	" "	26,500
15	-ESSA (GSL)	1,000	" "	37,600
16	-ESSA (BLL)	-	" "	21,000
17	HEW-NIH	-	" "	-
18	-FDA	650	" "	11,300
19	-NIMH(NCMHI)	10,400	Health & Med. Prof.	NA
20	USDA-NAL	-	Scientists & Engineers	247,795
21	-NAL (PIC)	2,500	" "	-
22	USDT-IRS	800	Lawyers	-
23	-IRS (RIRA)	670	"	-
24	HUD	2,500	-	43,800
25	AEC	3,000	Admin. and Mgmt.	13,500
26	NASA-STID	-	Scientists & Engineers	262,987
27	-GSFC	3,600	" "	> 50,000
28	FCC	500	Lawyers	7,000

Exhibit 21. The Library Users

No.	Library	MSN PRIM/SEC	COMPUTED LEVELS		
			Service (S)	Equipment (E)	Integ. (I)
1	USDI/HQ	EI/REG	8.49	3.95	3.64
2	-GS/HQ	RD/EI	6.66	1.00	10.00
3	-BM/CPRC	RD/RD	5.75	1.00	10.00
4	DOT-FAA/HQ	REG/EI	6.97	1.68	4.09
5	-BPR/HQ	REG/EI	6.06	1.00	6.60
6	USA-MERDC	RD/RD	8.18	2.13	10.00
7	-Ft. Detrick	RD/RD	8.18	4.00	10.00
8	-HDL	RD/RD	7.58	2.82	10.00
9	-Edgewood	RD/RD	7.27	3.19	4.32
10	USN-NRL	RD/RD	7.88	4.00	3.64
11	-NWL	RD/RD	8.80	3.97	4.32
12	-NOL	RD/RD	8.18	3.40	8.64
13	USDC-NBS	RD/EI	5.15	1.00	10.00
14	-ESSA/ASL	RD/SPT	5.75	1.00	10.00
15	-ESSA/GSL	RD/SPT	5.75	1.00	10.00
16	-ESSA/BLL	RD/SPT	5.75	3.86	5.00
17	HEW-NIH/HQ	RD/EI	-	4.00	5.68
18	-FDA/HQ	REG/RD	6.06	3.50	4.32
19	-NIMH/NCMHI	EI/RD	7.88	4.00	5.91
20	USDA-NAL	EI/RD	8.80	3.77	6.60
21	-NAL/PIC	EI/RD	6.36	4.00	5.91
22	USDT-IRS/HQ	REG/SPT	5.75	1.00	10.00
23	-IRS/RIRA	REG/SPT	6.66	4.00	7.60
24	HUD/HQ	EI/RD	7.88	1.00	10.00
25	AEC/HQ	RD/EI	5.46	2.97	4.32
26	NASA-STID/STIF	RD/EI	10.00	4.00	10.00
27	-GSFC	RD/RD	7.88	3.87	6.60
28	FCC/HQ	REG/EI	6.06	1.00	10.00

Exhibit 22. Calculated Measures for Library Automation

B. Analysis

The analysis will take the form of exploring the data and various quantities derived therefrom for meaningful relationships that can provide clues to development trends in three areas of interest:

- What visible library technical factors tend to imply the need for automation;
- What directions does the automation development take, both as to library function automated and the class of equipment applied to the job; and
- Over-all, what major administrative factors seem to associate with the observed fact of automation.

The approach to this discussion will be tutorial in nature. There is an extremely large number of possible relationships that could be examined among all the myriad variables involved in this study. The examination has dealt only with the more obvious relationships which intuitively one would expect to reflect developmental trends, if they exist at all.

The tutorial approach just mentioned will thus take the form of stating a proposition, and providing an heuristic argument as to what the relationship might be expected to be, and why. This is followed then by a graphical (usually) presentation of the desired relationship, and an evaluative discussion of the result.

1. Analysis of Administrative Factors

It was believed from the outset that the chance of finding purely technical factors that governed the course of automation developments was extremely low; on the contrary the thought was that there were far stronger, uncontrollable forces that played a most important role. There was no thought that causality could be established, but rather that an association could be established which would at least show what forces were at play.

Many more or less plausible relationships could be imagined. But it was felt necessary to establish certain very broad measures that could help in the examination. One of these, and perhaps the most important, was the level of service (S). Another was the level of equipment (E); in addition an elaborate classification by mission was undertaken. These are all described elsewhere.

Several relationships were tested, among which were plots of E against each of the factors F_1, F_2, F_3, and F_4, and likewise S against each of these. Only one of these seemed to show any structure: the plot of Level of Service, S, against the physical factor variable F_1. Exhibit 23 shows this graph; each point represents the library as labeled; beneath each is a number in parentheses showing level of equipment, E. The primary and secondary missions of the agencies are shown in the code mark. The oblique axes tend to separate the plane into quadrants: R and D institutions with high levels of automation in the right hand quadrant; most Regulatory agencies appear in the bottom quadrant and have mostly very low levels of automation; and finally the left hand quadrant contains all agencies with primary mission E1 (some very highly automated). Only NASA-STID (including STIF) represents the top quadrant. It should be noted that with only three exceptions (MERDC, HUD, and HDL) all libraries above S=7 have high levels of automation, with $E \geq 3.40$.

This chart suggested the value of exploring further the factor F_1. Now F_1, represents physical properties of the agency favorable to automation, such as high degree of internal control and coordination, and little dispersion, qualities which should make automation relatively easy to accomplish provided other circumstances were also favorable. Thus, F_1 combined with F_3 should make all factors external to the library favorable. If this sum were plotted against F_4, the internal library factors, any library occupying the upper right hand portion of the plane (all factors, F_4 and F_1+F_3, favorable) should find automation a favorable undertaking.

Exhibit 24 shows such a plot. The line drawn diagonally across the graph is so placed that all libraries beneath it are not automated (except FDA and NCMHI). It is believed that information centers do not fit the pattern properly, for reasons that are not fully understood. FDA's system has fallen into disuse because of limited access to computing facilities.

It should be reemphasized that all libraries lying above and to the right of the line have "everything going" for them: the entire administrative picture is favorable, and, in addition, the physical configuration (number and dispersion of the sub-elements) of the agency is favorable. The next step in the process was to examine the effect of budget factors (F_2) on just those libraries for which all other factors were favorable according to Exhibit 24. This plot is shown in Exhibit 25, where level of equipment, E, is plotted against Budget Factor F_2. As would be expected there is a general trend toward higher levels of automation as the budget factor increases.

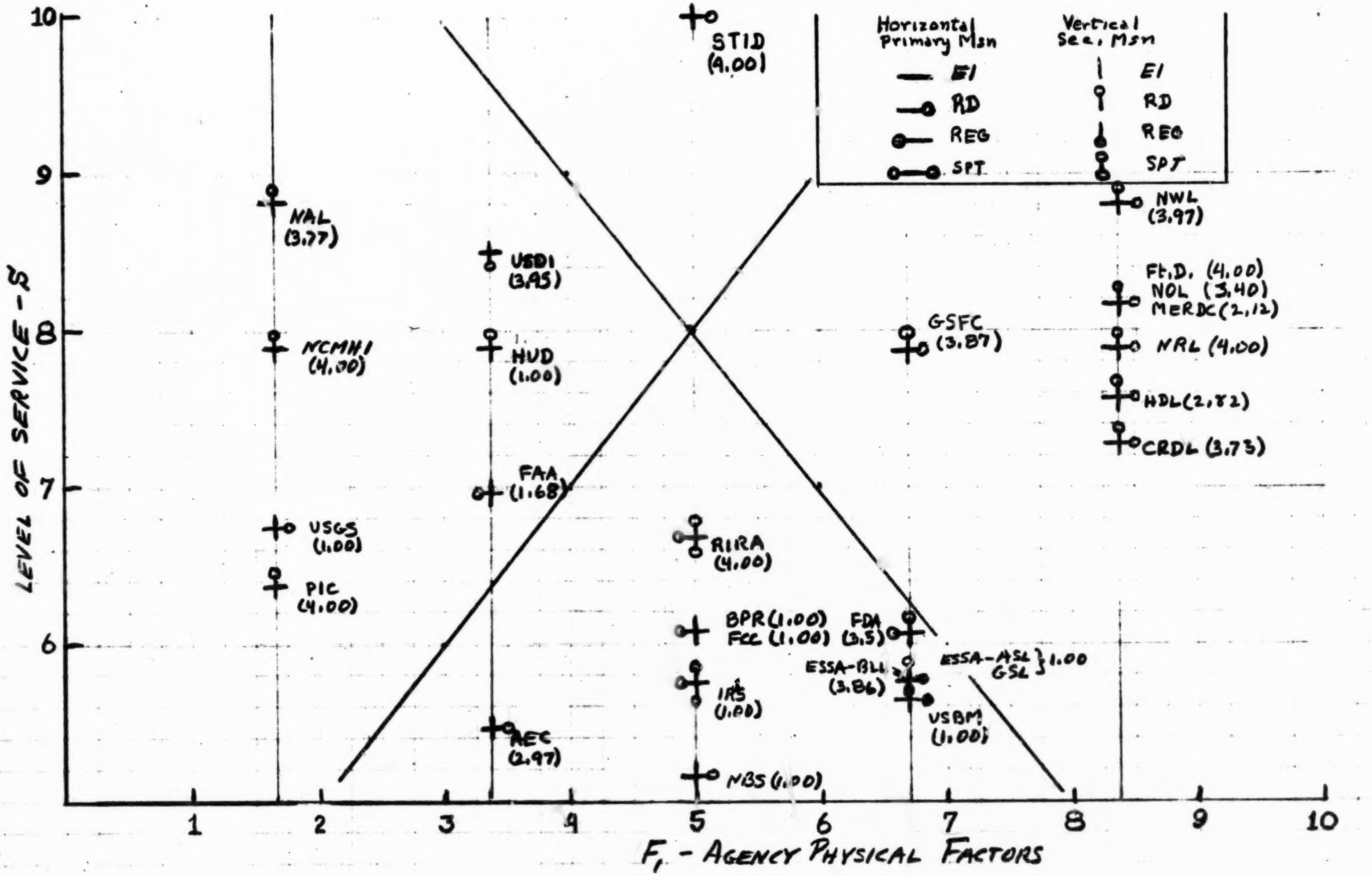


Exhibit 23. Agency Physical Factors vs. Level of Service

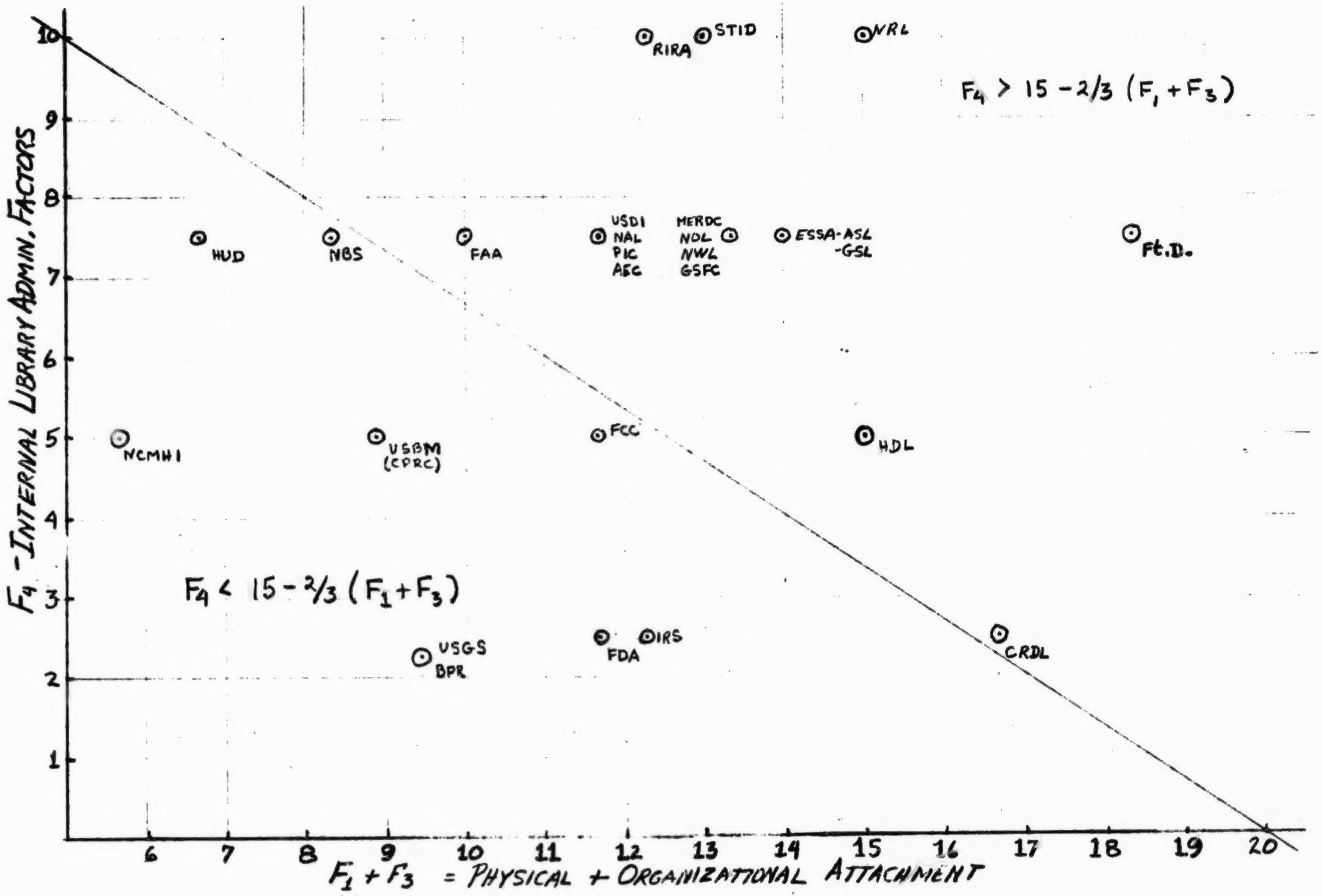


Exhibit 24. Separation of Libraries by Administrative Factors

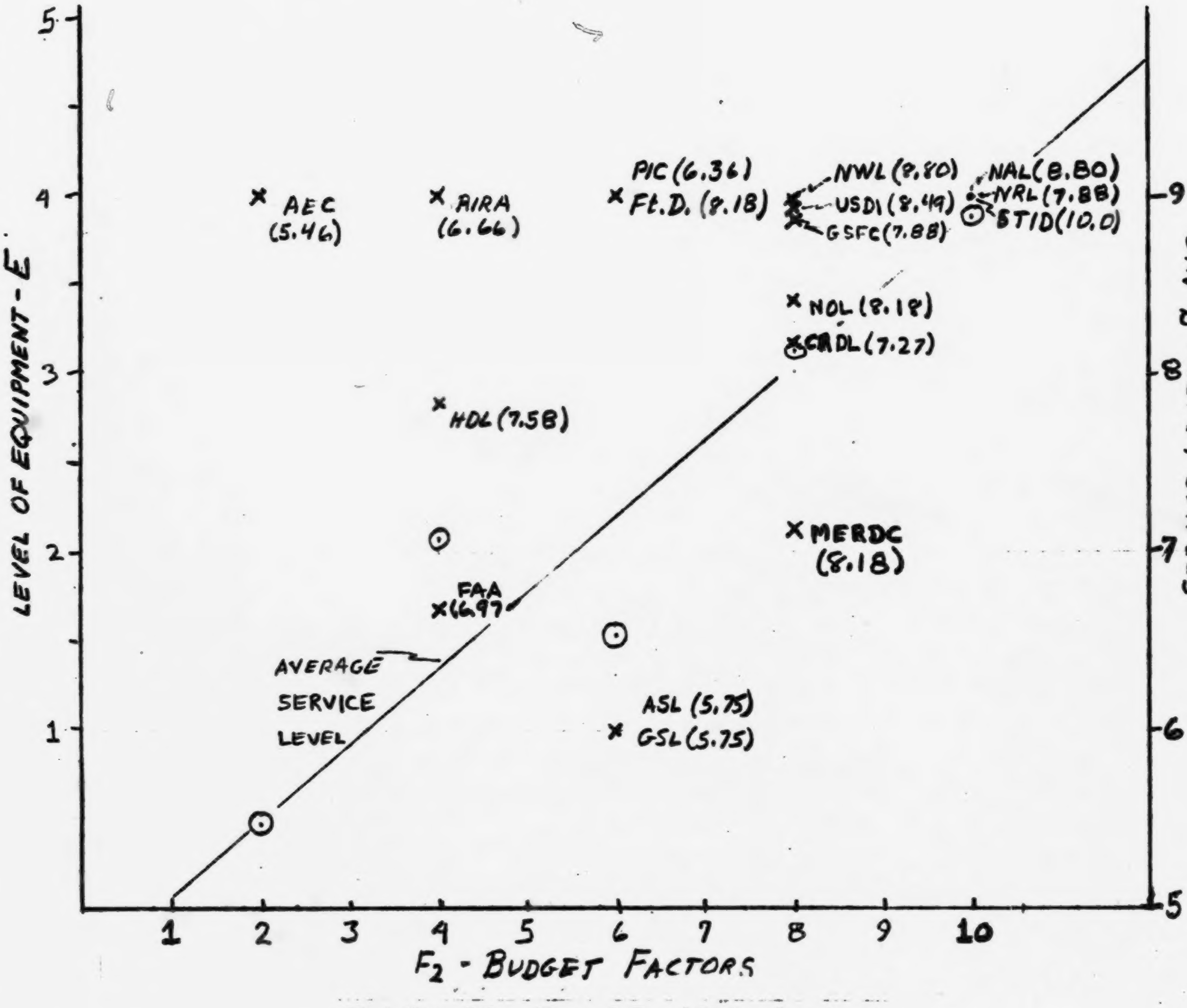


Exhibit 25. E and S, AVG, Against Budget Factor

However, even more interesting, is the straight line shown in the graph, which is a plot of the average level of service at each level of budget factor, against F_2. This shows the strong relationship between the level of service and the level of automation. A reciprocal relationship between E, AVG. and budget factor is shown in Exhibit 26.

Conclusions to be drawn from these relationships must be approached with caution. Even though one might expect that if service level improves with level of automation, it cannot be assumed that therefore automation is justified. The size of user community must also be taken into account. Exhibits 27 and 28 show this. Exhibit 27 shows level of equipment against SU/N, Service x Number of Users/ Size of library staff. If SU/N is thought of as unit output of service per librarian, it should increase with E. However, it seems even to increase almost independent of E. Exhibit 28 shows level of service, S, against the cost per unit of output service. It is noted that no unambiguous trend is noted there.

Thus the importance of the budget factor F_2 seems established:

- Level of service and level of automation increase together as more favorable budget conditions obtain, provided that all other conditions implied by F_1, F_3, and F_4 are at an acceptable level.

However, examination of dollar budgets does not fully support the above criterion. The conclusion has to be conditioned, as follows:

- High dollar budgets usually characterize highly automated libraries, but do not necessarily imply high service; relatively low dollar budgets likewise do not necessarily mean either low service or a non-automated condition.

An intuitive administrative factor which would tend to enhance the probability of finding an agency automated is that situation where the agency (at a substantially higher level than the library) has a specific requirement to disseminate information generated in the pursuit of its primary mission activities. This question has been included in the aggregated factors. However, it is interesting to examine it by itself. Thus, an appropriate question is, "How many libraries take steps toward automation because they are consistent with a larger requirement to disseminate information outside their agency?" Conversely, for how many who have not automated is this consistent with a lack of a mandate to disseminate information?"

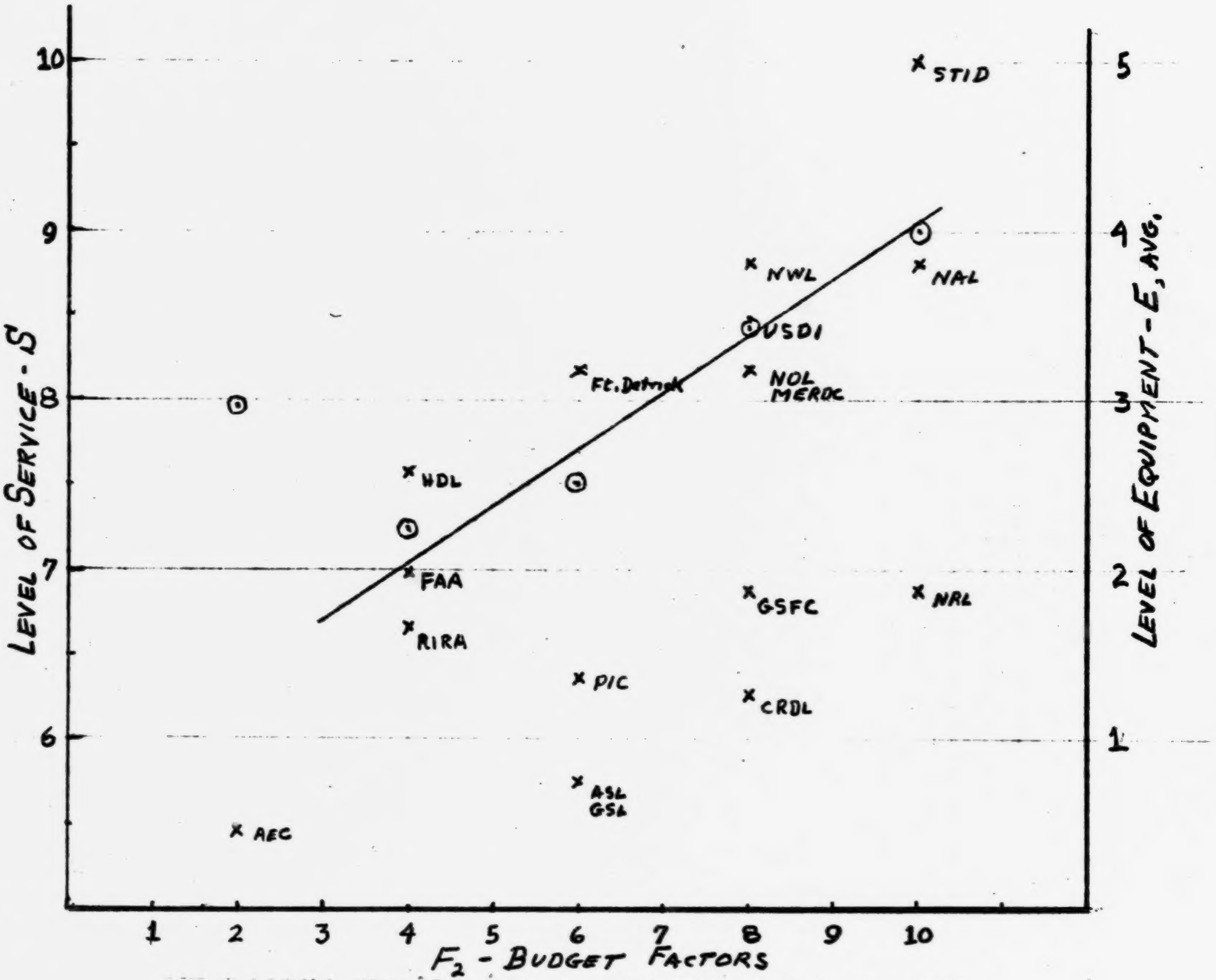


Exhibit 26. Service S and E, AVG. vs. Budget Factor

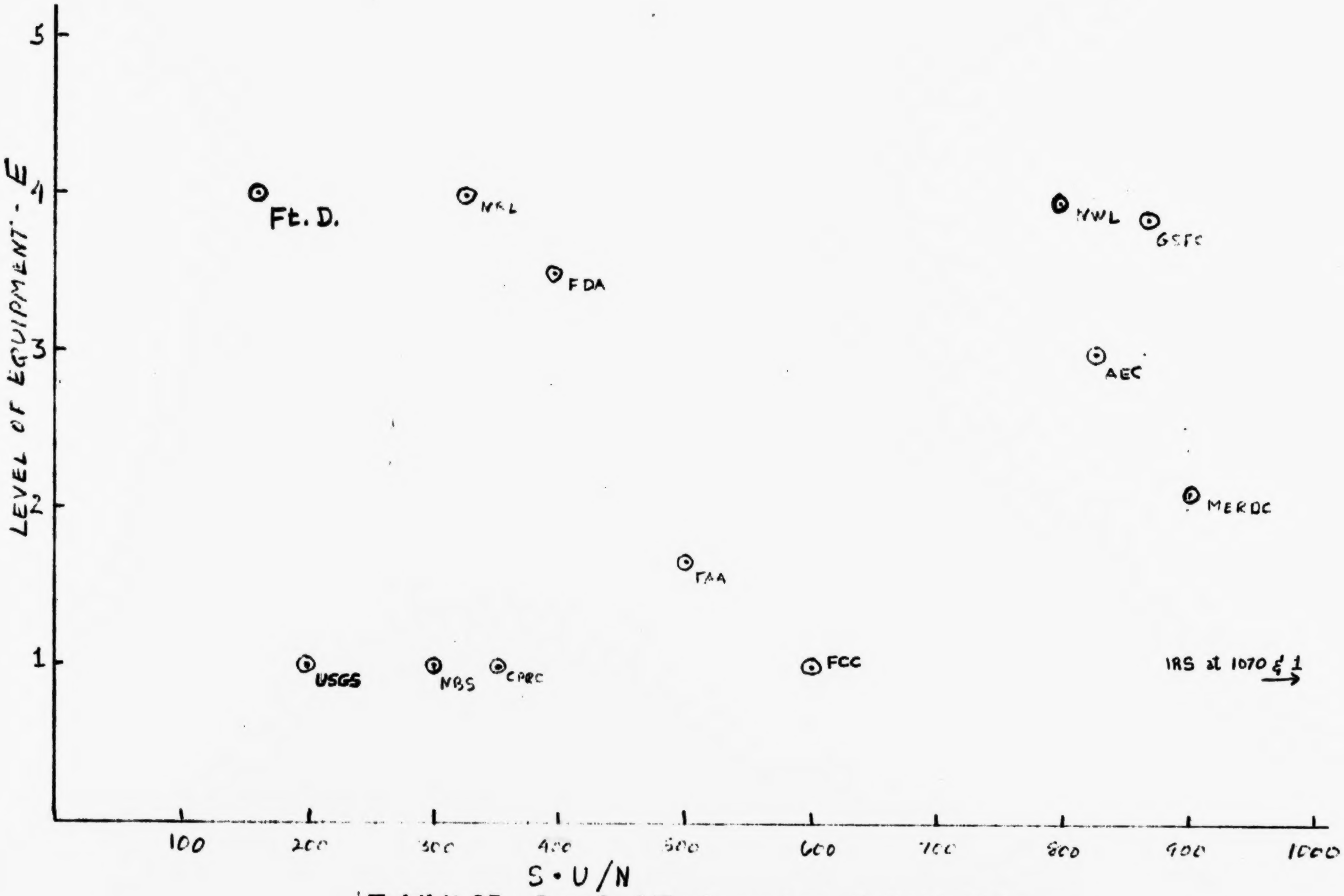


Exhibit 27. Level of Equipment vs. Individual Output

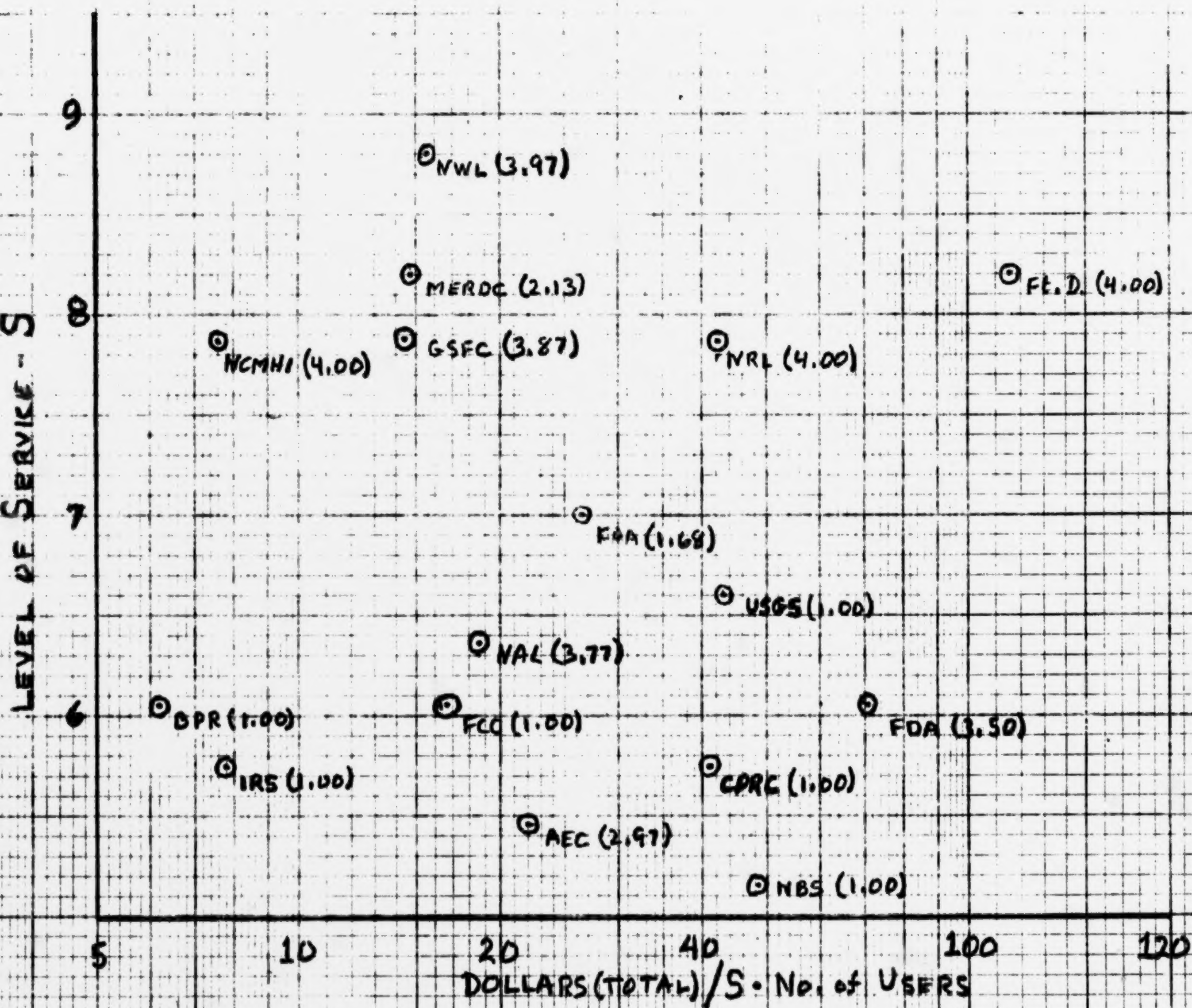


Exhibit 28. Level of Service vs. Unit Cost of Service Output

To examine this there are two questions:

(a) Has the agency an explicit statement in its roles and missions establishing a requirement to distribute information external to the agency?

(b) Has the library undertaken to automate?

The results of this study showed the following:

Have Mission Mandate?	Have Automated? Yes	Have Automated? No
Yes	15 ←	(2) 4
No	4 ←	(1) 5

Thus, 15 of 19 libraries whose parent agency mission calls for information dissemination, have automated; while 5 of 9 whose agency missions make no such statement have not automated, but are nevertheless consistent. The total YY and NN combinations is 20 out of 28 who are consistent with the mission.

The remaining 4 of the 9 libraries just mentioned have automated, even though the mission states no explicit requirement for dissemination.

Two of the libraries in the YN category are planning automation in the near future, and one additional in the NN category. Once these are underway, 17 of the 19 who have a specific information dissemination mandate will have at least begun automation, while 5 of the 9 who do not will likewise have automated.

It would appear that:

- The existence of an explicit mission statement which either directly calls for, or implies, the active and initiative dissemination, either to other agencies or non-federal bodies, of information generated in the course of the conduct of the primary mission, argues for automation of the "source" establishment.

2. Addressing the Automation Development Plan

Many questions bear on the choice of specific approach to automation of the library. The approach used in this analysis has been to incorporate many factors into a few aggregated variables. It now remains to sort down on these variables in order to show what people who have automated have actually done, and to generalize on where their plans for the future will take them. In addition, certain questions which are of more incidental interest but nevertheless relevant will be raised for specific answer as given by the interviews.

a. Relationship of Budget to Holdings

Exhibit 29 shows the library budgets obtained from the survey, plotted against the percentage of non-book holdings. Earlier in the study a similar chart showed that higher level automation libraries occupied linear bands with negative slopes as both money and percent of non-book materials increased. These bands on the logarithmic plot of Exhibit 29 appear as curved bands such as that sketched in the graph. However, the sample here has such a predominance of libraries with large non-book holdings that nearly all have some degree of automation, and the scatter is sufficient to mask the banding effect. Nevertheless it would appear that any library having in excess of 65% non-book holdings, and more than $100, 000 budget will have a very high degree of automation, decreasing as both non-book proportions and funds decrease.

b. Automation Sequence

(1) Notation

As a result of conducting interviews with federal library/ information personnel, an historical presentation of the automation activities of the surveyed libraries can be presented. Each library considered in this survey is briefly described in a data summary in Appendix B. The implementation sequence and a description of each mechanized/automated operation may be found in the answers to questions 8, 9, and 10 of the "LIBRARY TECHNICAL DATA" section of each data summary.

To illustrate the progression of automation in each library a PERT chart-like notation has been developed for Exhibit 30. Each automation "event" is represented by a circle with an exterior number in "( )" if past and in "[ ]" if future. These numbers coincide with those in the library data summary answers to questions 8, 9, and 10. Within each circle, the first number indicates which function has been automated at the event, the second number shows the level of automation, and the third entry indicates the material or materials affected. Two or more circles linked by a horizontal line indicate simultaneous "events". Absence of past automation or specific automation plans

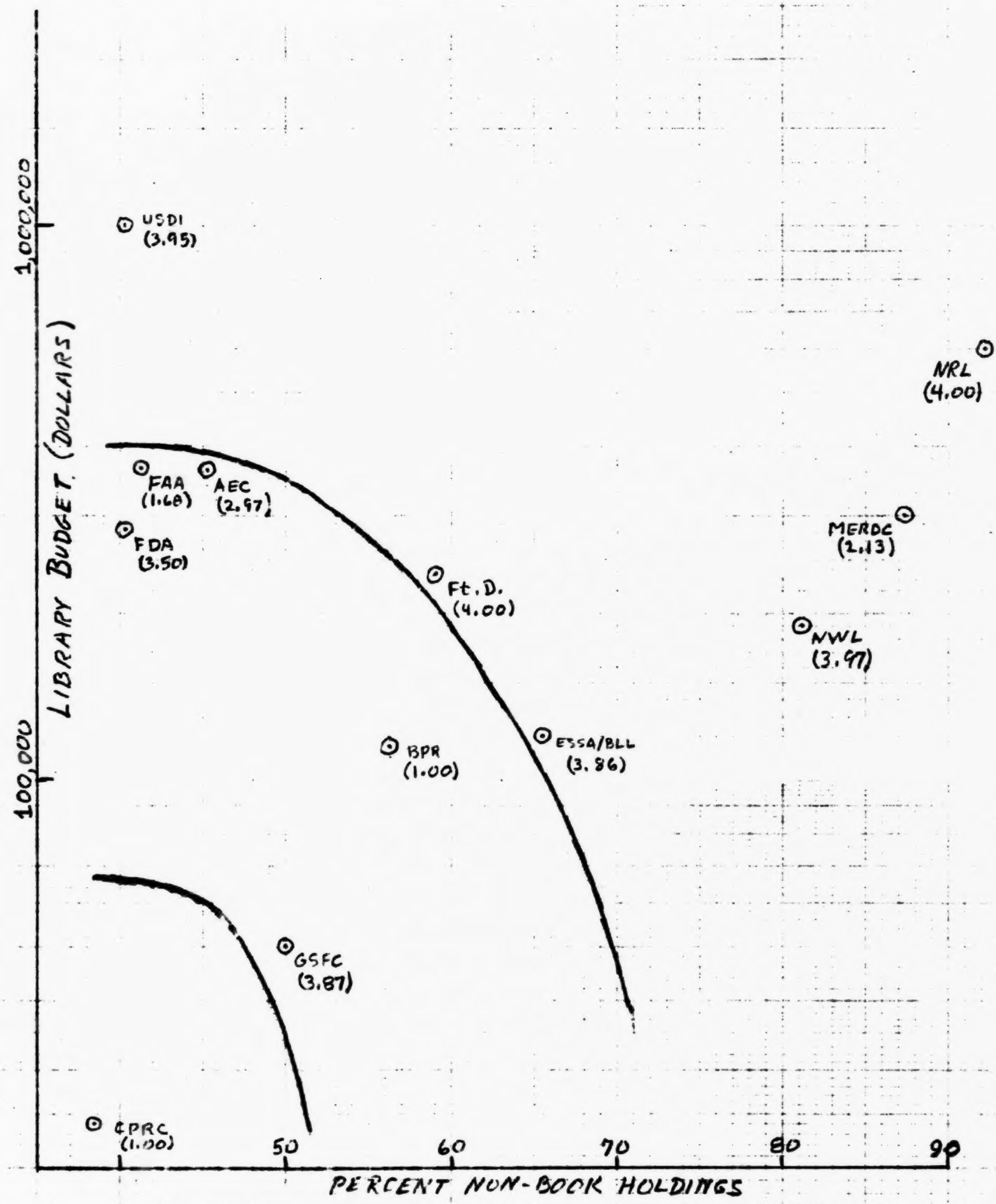


Exhibit 29. Library Budget vs. Non-Book Holdings

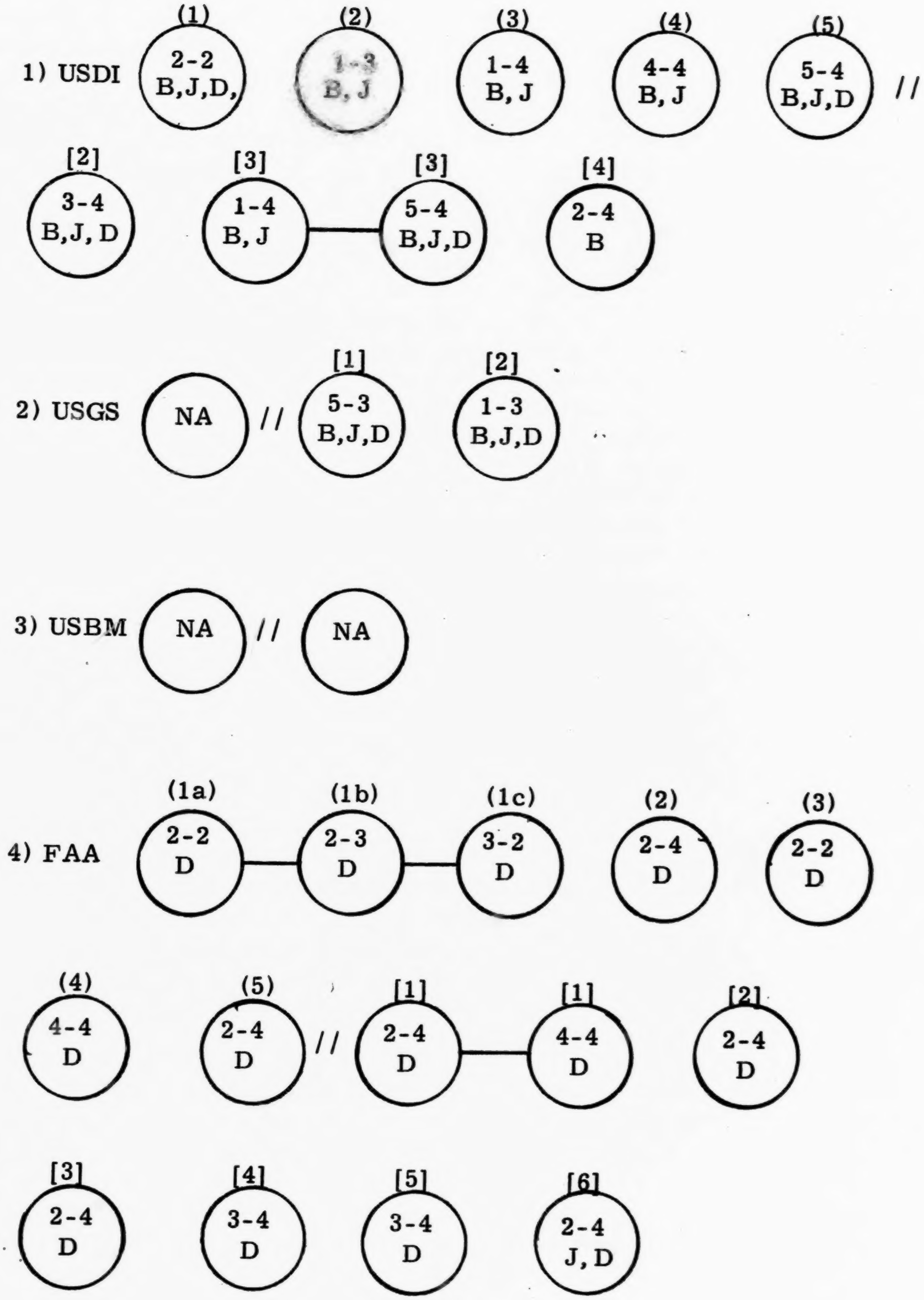

1) USDI
(1)
2-2
B,J,D,
(2)
1-3
B, J
(3)
1-4
B, J
(4)
4-4
B, J
(5)
5-4
B,J,D
//
[2]
3-4
B,J, D
[3]
1-4
B, J
[3]
5-4
B,J,D
[4]
2-4
B
2) USGS
NA
//
[1]
5-3
B,J,D
[2]
1-3
B,J,D
3) USBM
NA
//
NA
4) FAA
(1a)
2-2
D
(1b)
2-3
D
(1c)
3-2
D
(2)
2-4
D
(3)
2-2
D
(4)
4-4
D
(5)
2-4
D
//
[1]
2-4
D
[1]
4-4
D
[2]
2-4
D
[3]
2-4
D
[4]
3-4
D
[5]
3-4
D
[6]
2-4
J, D

Exhibit 30. Automation Sequence of Surveyed Libraries

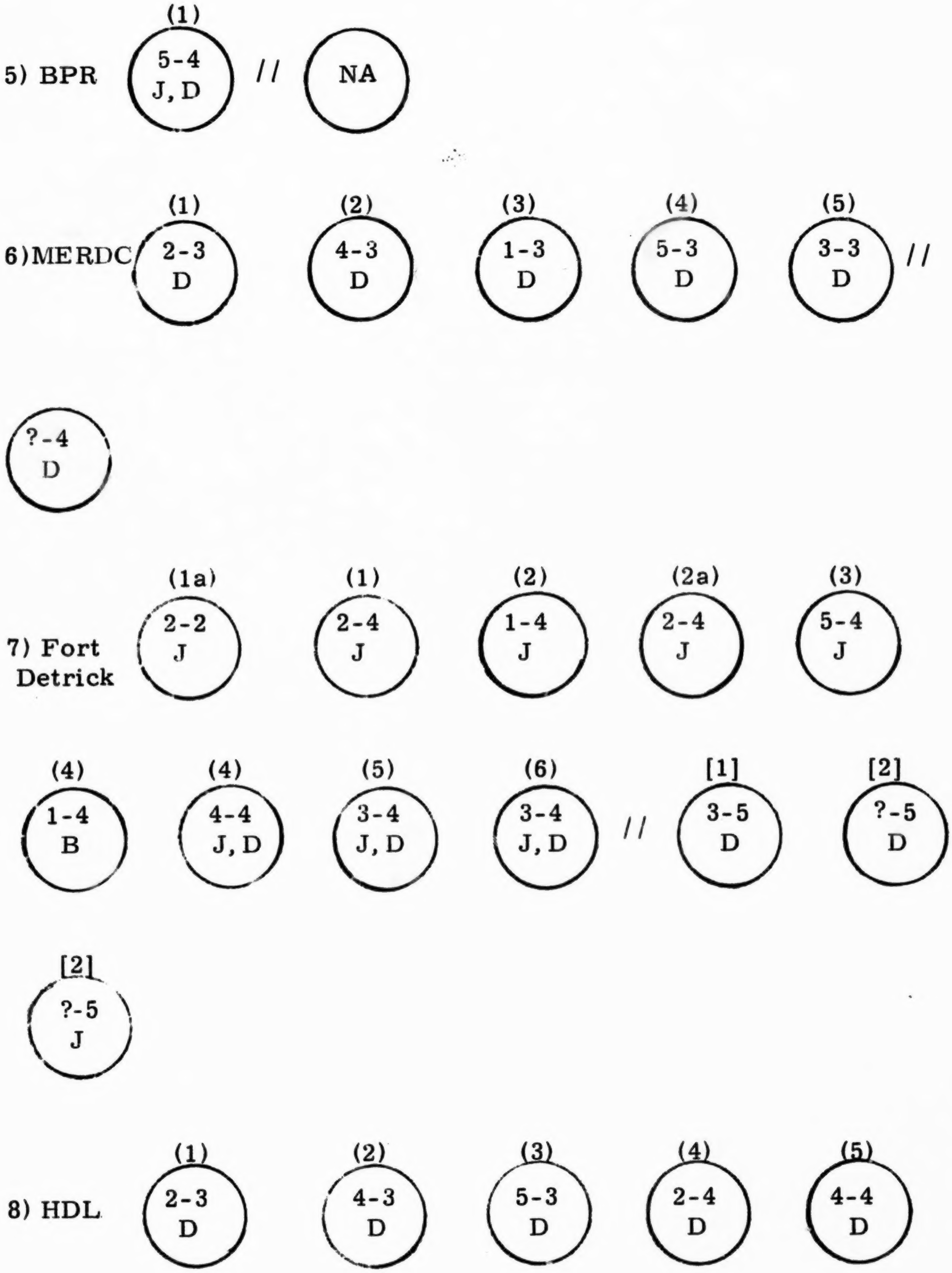

5) BPR
(1)
5-4
J, D
//
NA
6)MERDC
(1)
2-3
D
(2)
4-3
D
(3)
1-3
D
(4)
5-3
D
(5)
3-3
D
//
?-4
D
7) Fort Detrick
(1a)
2-2
J
(1)
2-4
J
(2)
1-4
J
(2a)
2-4
J
(3)
5-4
J
(4)
1-4
B
(4)
4-4
J, D
(5)
3-4
J, D
(6)
3-4
J, D
//
[1]
3-5
D
[2]
?-5
D
[2]
?-5
J
8) HDL
(1)
2-3
D
(2)
4-3
D
(3)
5-3
D
(4)
2-4
D
(5)
4-4
D

Exhibit 30. Automation Sequence of
Surveyed Libraries (cont'd)

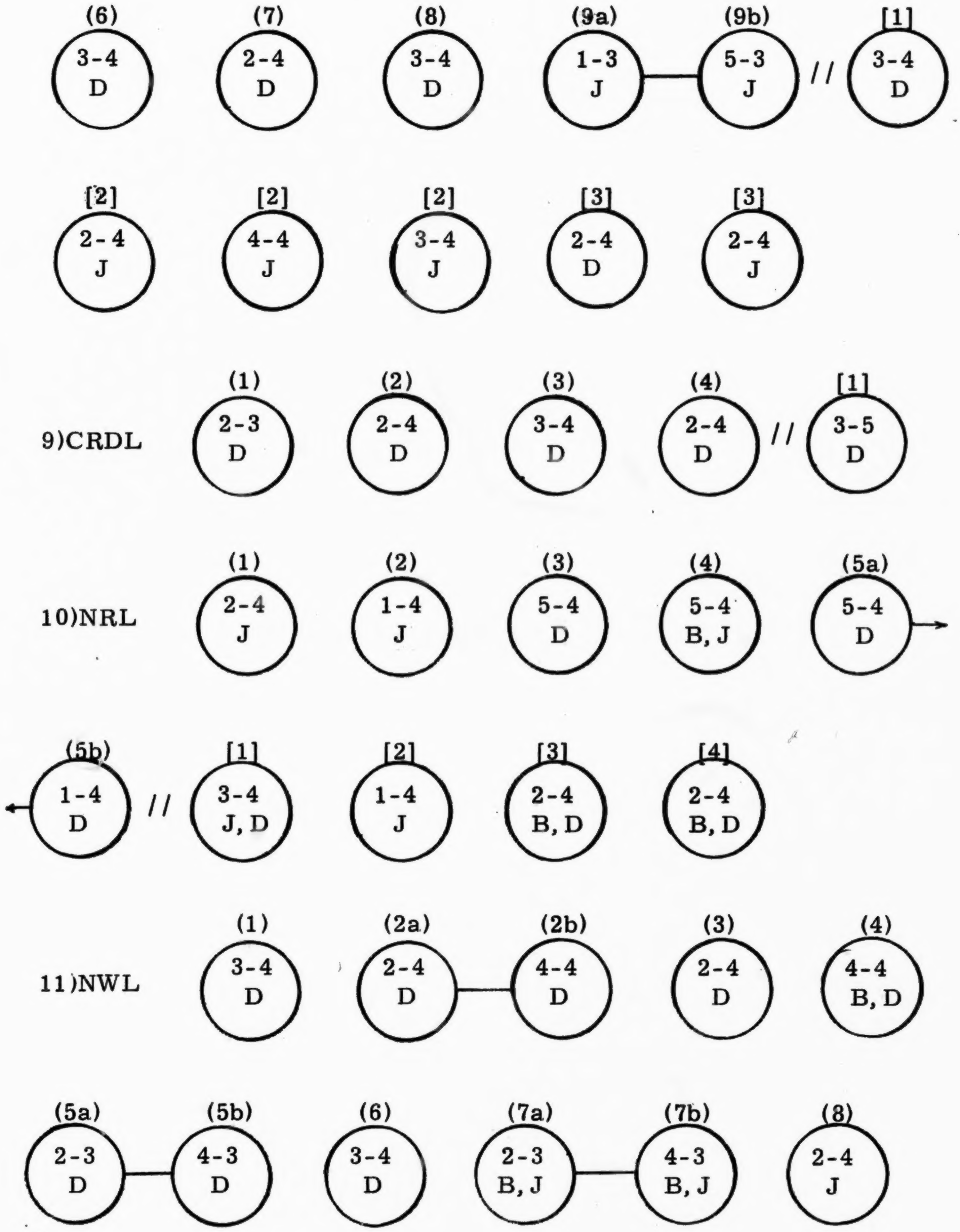

(6) 3-4 D
(7) 2-4 D
(8) 3-4 D
(9a) 1-3 J
(9b) 5-3 J
//
[1] 3-4 D
[2] 2-4 J
[2] 4-4 J
[2] 3-4 J
[3] 2-4 D
[3] 2-4 J
9)CRDL
(1) 2-3 D
(2) 2-4 D
(3) 3-4 D
(4) 2-4 D
//
[1] 3-5 D
10)NRL
(1) 2-4 J
(2) 1-4 J
(3) 5-4 D
(4) 5-4 B, J
(5a) 5-4 D
(5b) 1-4 D
//
[1] 3-4 J, D
[2] 1-4 J
[3] 2-4 B, D
[4] 2-4 B, D
11)NWL
(1) 3-4 D
(2a) 2-4 D
(2b) 4-4 D
(3) 2-4 D
(4) 4-4 B, D
(5a) 2-3 D
(5b) 4-3 D
(6) 3-4 D
(7a) 2-3 B, J
(7b) 4-3 B, J
(8) 2-4 J

Exhibit 30. Automation Sequence of
Surveyed Libraries (cont'd)

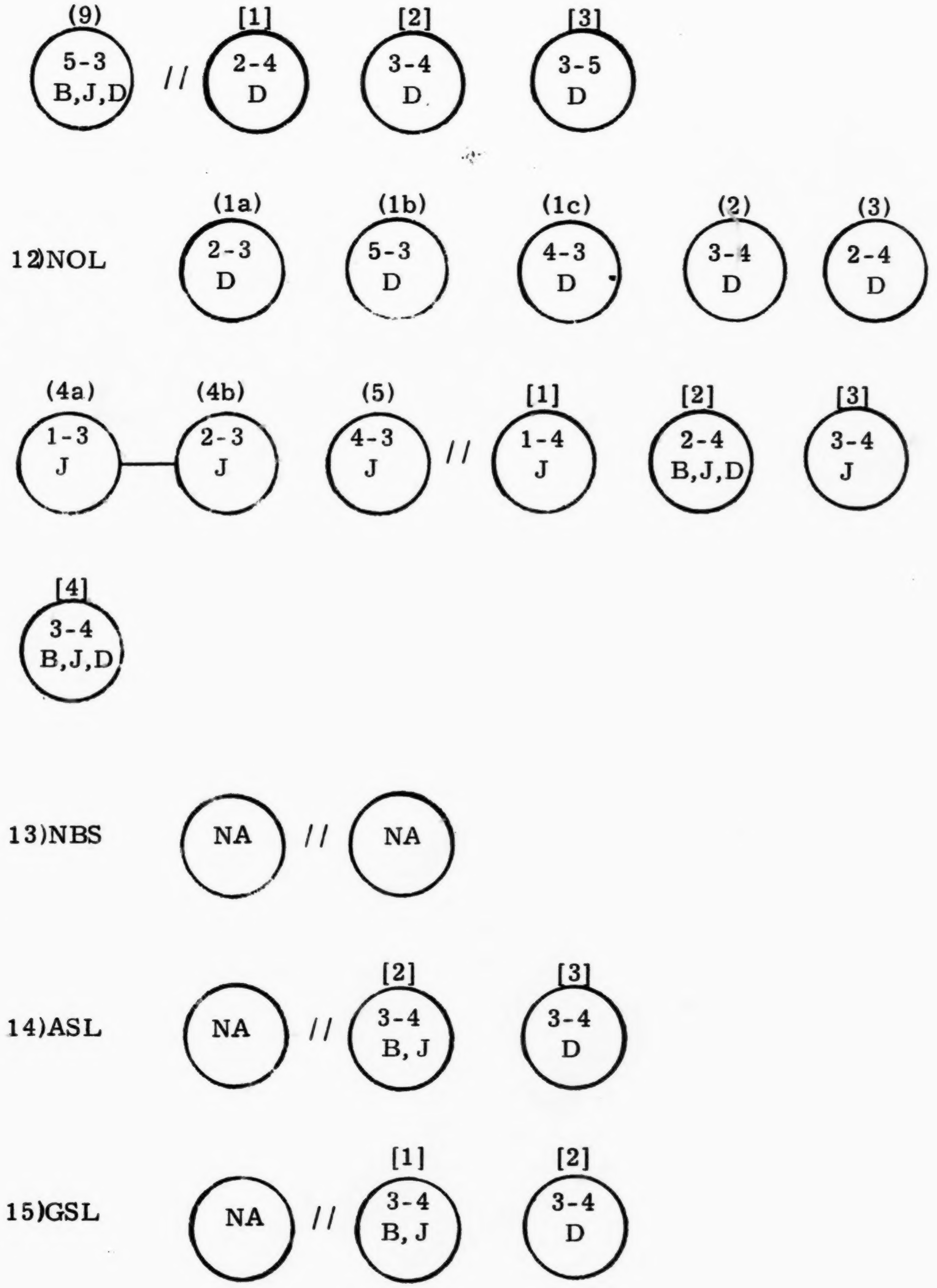

(9)
5-3
B,J,D
//
[1]
2-4
D
[2]
3-4
D
[3]
3-5
D
12)NOL
(1a)
2-3
D
(1b)
5-3
D
(1c)
4-3
D
(2)
3-4
D
(3)
2-4
D
(4a)
1-3
J
(4b)
2-3
J
(5)
4-3
J
//
[1]
1-4
J
[2]
2-4
B,J,D
[3]
3-4
J
[4]
3-4
B,J,D
13)NBS
NA
//
NA
14)ASL
NA
//
[2]
3-4
B, J
[3]
3-4
D
15)GSL
NA
//
[1]
3-4
B, J
[2]
3-4
D

Exhibit 30. Automation Sequence of Surveyed Libraries (cont'd)

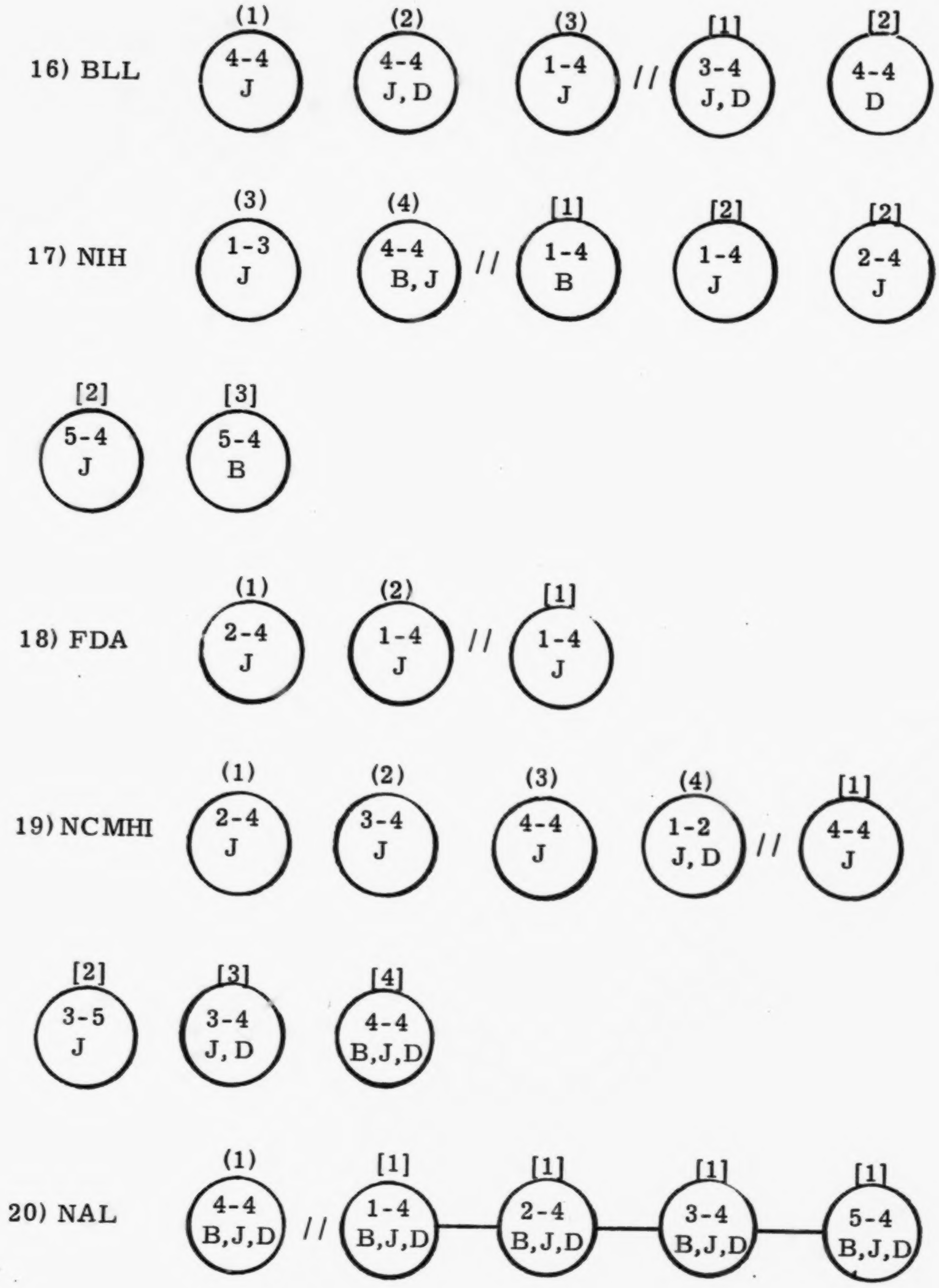
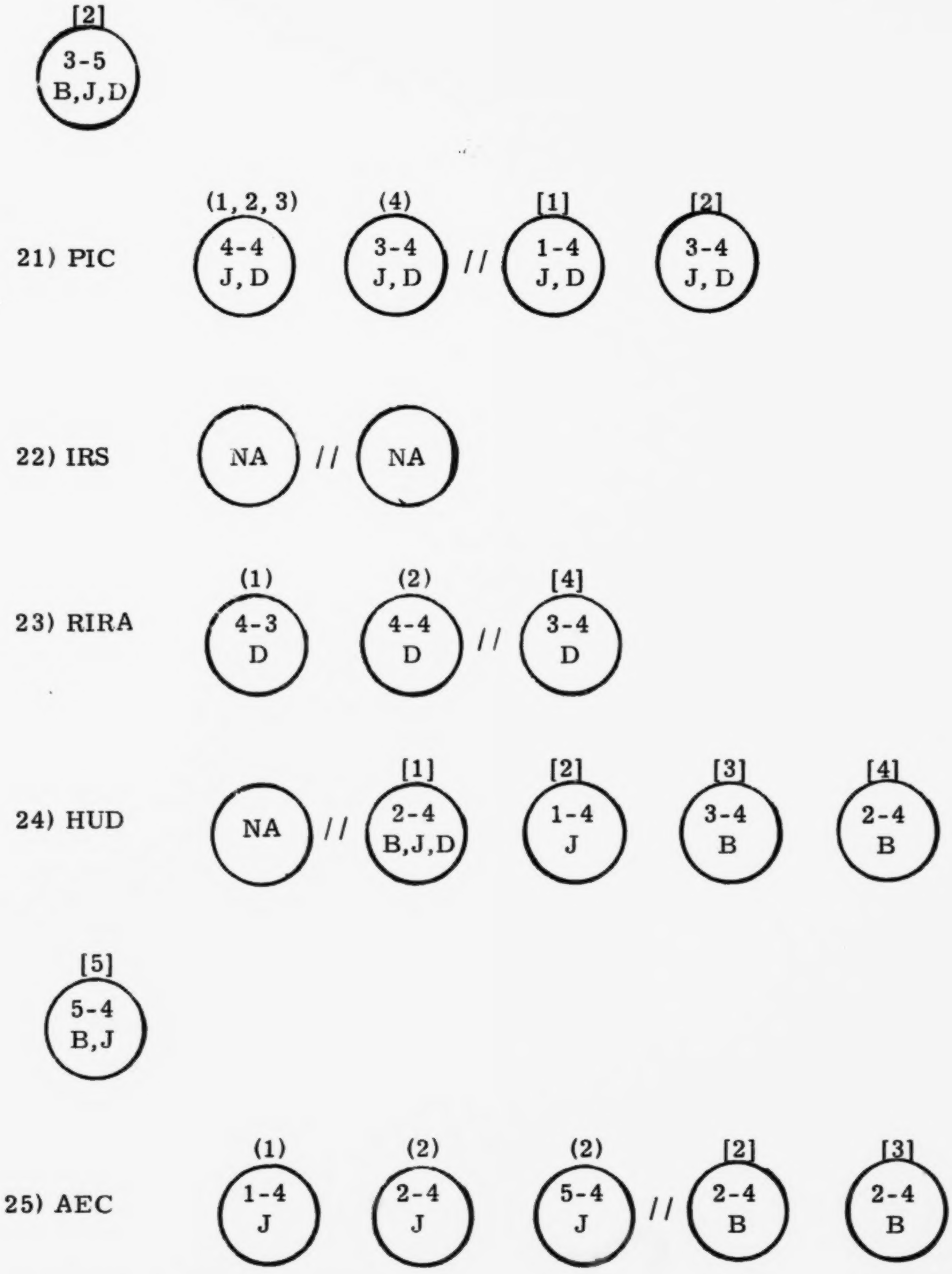

16) BLL
(1) 4-4 J
(2) 4-4 J, D
(3) 1-4 J
//
[1] 3-4 J, D
[2] 4-4 D
17) NIH
(3) 1-3 J
(4) 4-4 B, J
//
[1] 1-4 B
[2] 1-4 J
[2] 2-4 J
[2] 5-4 J
[3] 5-4 B
18) FDA
(1) 2-4 J
(2) 1-4 J
//
[1] 1-4 J
19) NCMHI
(1) 2-4 J
(2) 3-4 J
(3) 4-4 J
(4) 1-2 J, D
//
[1] 4-4 J
[2] 3-5 J
[3] 3-4 J, D
[4] 4-4 B,J,D
20) NAL
(1) 4-4 B,J,D
//
[1] 1-4 B,J,D
[1] 2-4 B,J,D
[1] 3-4 B,J,D
[1] 5-4 B,J,D

Exhibit 30. Automation Sequence of Surveyed Libraries (cont'd)


[2]
3-5
B,J,D
21) PIC
(1, 2, 3)
4-4
J, D
(4)
3-4
J, D
//
[1]
1-4
J, D
[2]
3-4
J, D
22) IRS
NA
//
NA
23) RIRA
(1)
4-3
D
(2)
4-4
D
//
[4]
3-4
D
24) HUD
NA
//
[1]
2-4
B,J,D
[2]
1-4
J
[3]
3-4
B
[4]
2-4
B
[5]
5-4
B,J
25) AEC
(1)
1-4
J
(2)
2-4
J
(2)
5-4
J
//
[2]
2-4
B
[3]
2-4
B

26) STID - partial information

Exhibit 30. Automation Sequence of Surveyed Libraries (cont'd)

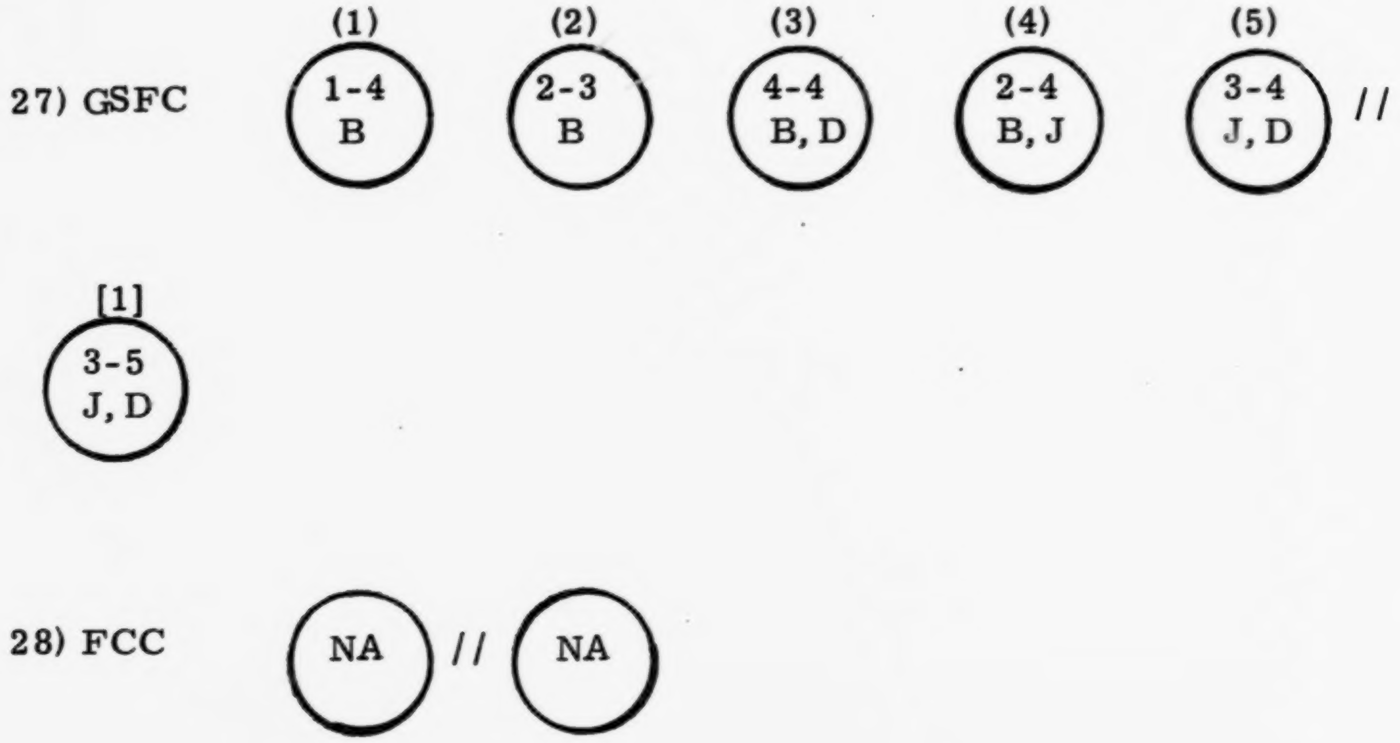
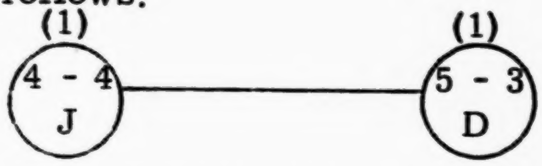

27) GSFC
(1)
1-4
B
(2)
2-3
B
(3)
4-4
B, D
(4)
2-4
B, J
(5)
3-4
J, D
//
[1]
3-5
J, D
28) FCC
NA
//
NA

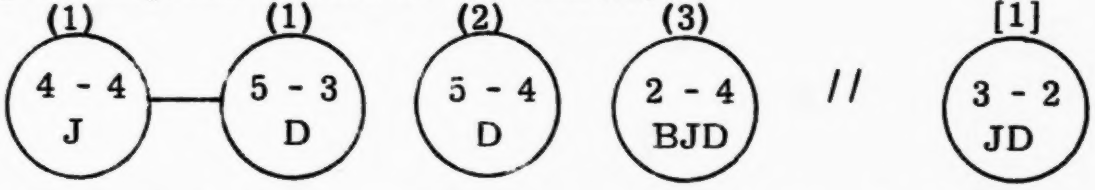
Exhibit 30. Automation Sequence of
Surveyed Libraries (cont'd)

for the future is noted with an encircled "NA". Past and future are separated by //.

Thus, for example, a library which began its automation program by simultaneously printing an accessions list for periodicals on a computer and controlling document circulation with EAM equipment would begin as follows:



If it next placed the document circulation cards under the control of a computer program and then concluded by printing a computerized book catalog for its monographs, serials, and technical reports, its past sequence would be as follows:



The final circle in the preceding chart indicates that the library's only plan for the future is the implementation of an aided-manual journal and document searching device.

(2) "Order of Encounter"

By inspecting the automation sequence diagrams in Exhibit 30, the order in which major library functions and major types of materials were and will be automated can be assessed. This order is determined by reviewing each library's entire past and planned sequence, first with respect to function and secondly with respect to material.

The order in which the surveyed libraries have automated or plan to automate major library operations (functions) is shown in the left portion of Exhibit 31. This order is simply an "order of encounter," i.e., a library's second and succeeding passes through any one function are ignored. The second pass is usually made for reasons of upgrading or downgrading the level of equipment utilized or to change the number or type of materials processed. Similarly, the past and planned order of automating various materials is shown in the right half of Exhibit 31.

The number of times each function was a library's first encounter with automation has been summarized at the top of Exhibit 32. Clearly, the dominant first-choice-for-automation function is

	Library	Order of Automation of Functions		Order of Automation of Materials	
		Past	Future	Past	Future
1	USDI	2-1-4-5	3	BJD-BJ	B
2	USGS	NA	5-1	NA	BJD
3	USBM	NA	NA	NA	NA
4	FAA	2-3-4		D	JD
5	BPR	5	NA	JD	NA
6	MERDC	2-4-1-5-3	?	D	
7	Ft. D	2-1-5-4-3	?	J-B-JD	D
8	HDL	2-4-5-3-1		D-J	
9	CRDL	2-3		D	
10	NRL	2-1-5	3	J-D-BJ	JD-BD
11	NWL	3-2-4-5		D-BD-BJ-J-BJD	
12	NOL	2-5-4-3-1		D-J	BJD
13	NBS	NA	NA	NA	NA
14	ASL	NA	3	NA	BJ-D
15	GSL	NA	3	NA	BJ-D
16	BLL	4-1	3	J-JD	D
17	NIH	1-4	2-5	J-BJ	B
18	FDA	2-1		J	
19	NCMHI	2-3-4-1		J-JD	BJD
20	NAL	4	1-2-3-5	BJD	
21	PIC	4-3	1	JD	
22	IRS	NA	NA	NA	NA
23	RIRA	4	3	D	
24	HUD	NA	2-1-3-5	NA	BJD-J-B-BJ
25	AEC	1-2-5		J	B
26	STID				
27	GSFC	1-2-4-3		B-BD-BJ-JD	
28	FCC	NA	NA	NA	NA

Legend
1 - Selection Acquisition
2 - Input Processing
3 - Reference & Retrieval
4 - Publication
5 - Circulation

Legend
B = Book
J = Journal
D = Document

Exhibit 31. "Order of Encounter" in Automating Functions and Materials

First function automated among surveyed libraries

Function	No. of libraries which took this step first	No. of libraries which took or will take this step first.
1	3	3
2	10	11
3	1	3
4	4	4
5	1	2
	TOTAL 19	TOTAL 23

First material or group of materials automated among surveyed libraries

Material(s)	No. of libraries which automated this material first	No. of libraries which automated or will automate this material first
B	1	1
J	7	7
D	7	7
BJ	0	2
BD	0	0
JD	2	2
BJD	2	4
	TOTAL 19	TOTAL 23

Exhibit 32. First Function & First Material Automated

function 2 — Input Processing, followed by function 4 — Publication. Journals and documents, as noted in the lower half of Exhibit 32, were equally probable first choices for materials to be automated.

(3) Aggregated Sequences — A Generalized Pattern

To view the entire spectrum of automation activities, aggregated sequence diagrams have been developed. Exhibit 33 portrays the entire range of transitions between all past automation events in the libraries surveyed in this study. An aggregate picture of all planned automation appears as Exhibit 34. These figures are essentially self-explanatory, but a few comments on notation are needed:

- Arrows connecting any two events point in the direction of the most recently performed event.
- Events performed simultaneously are indicated by contiguous circles and by dual output and/or input arrows.
- Events without input or output arrows indicate complete sequences which consist of only one event.
- Events without output arrows are sequence terminations, but not all terminations are so indicated, i.e., any event can be a sequence termination.
- Similarly, events without input arrows are sequence initiation points, but not all initial events are so indicated.
- All of the indicated transitions have been made at least once. Numbers appearing on many of the transitions indicate the number of times they have been traversed in excess of the initial first pass.

Excluding allowances for varieties of simultaneous events, 51 unique automation events were encoutered in the libraries surveyed in this study, as determined by eliminating redundant events between Exhibits 33 and 34. This is out of a total of 140 possible events. [Since 5 functions, 7 types and groups of materials, and 4 levels (2, 3, 4, and 5 - manual level 1 is ignored) were involved, the total possible number of events is 5x7x4 = 140.]

Interested readers who may be in libraries which are at any of the 51 events (states), can easily see the transitions available

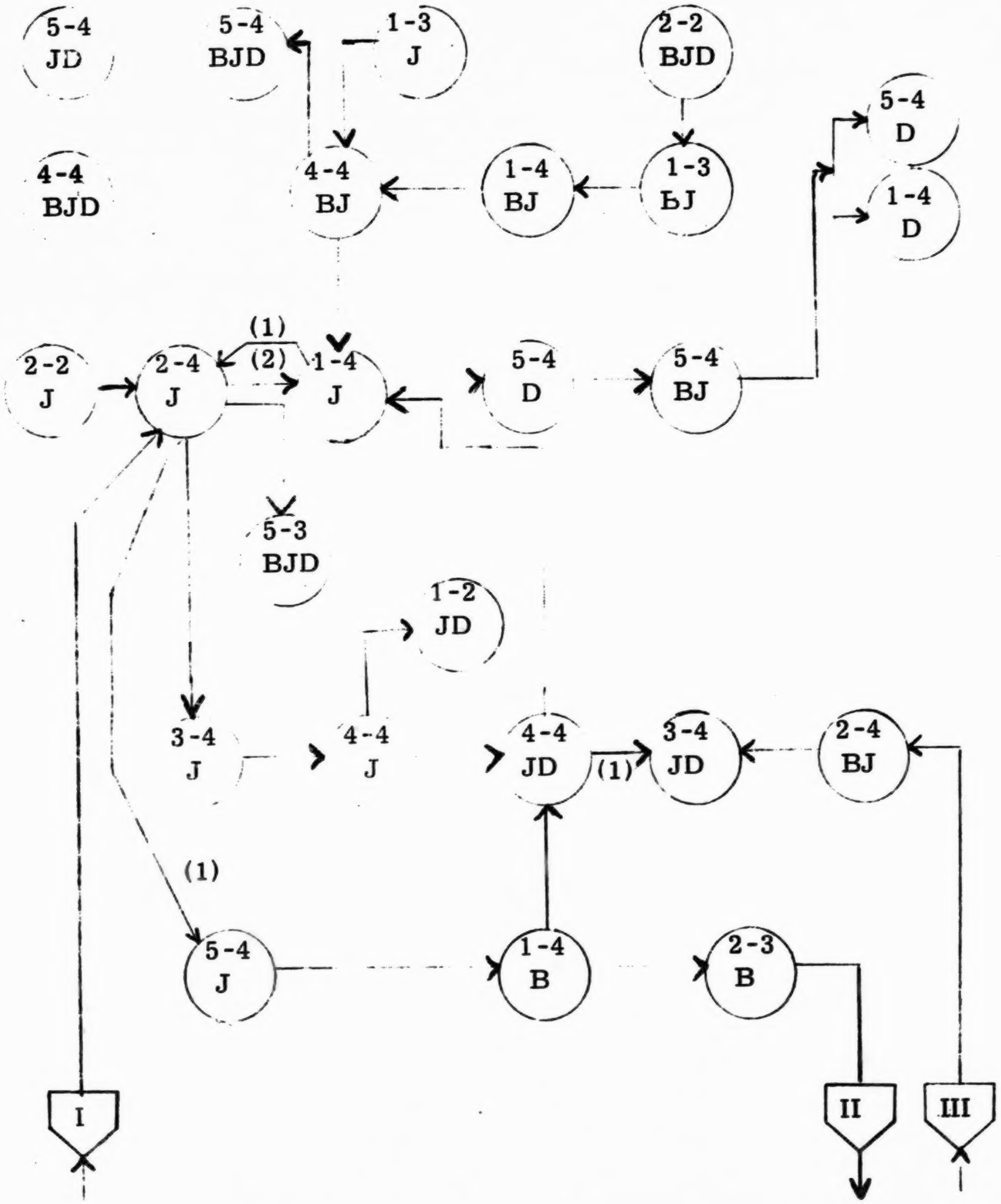

5-4 JD
5-4 BJD
1-3 J
2-2 BJD
4-4 BJD
4-4 BJ
1-4 BJ
1-3 BJ
5-4 D
1-4 D
2-2 J
2-4 J
(1)
(2)
1-4 J
5-4 D
5-4 BJ
5-3 BJD
1-2 JD
3-4 J
4-4 J
4-4 JD
(1)
3-4 JD
2-4 BJ
(1)
5-4 J
1-4 B
2-3 B
I
II
III

Exhibit 33. Past Automation Sequence

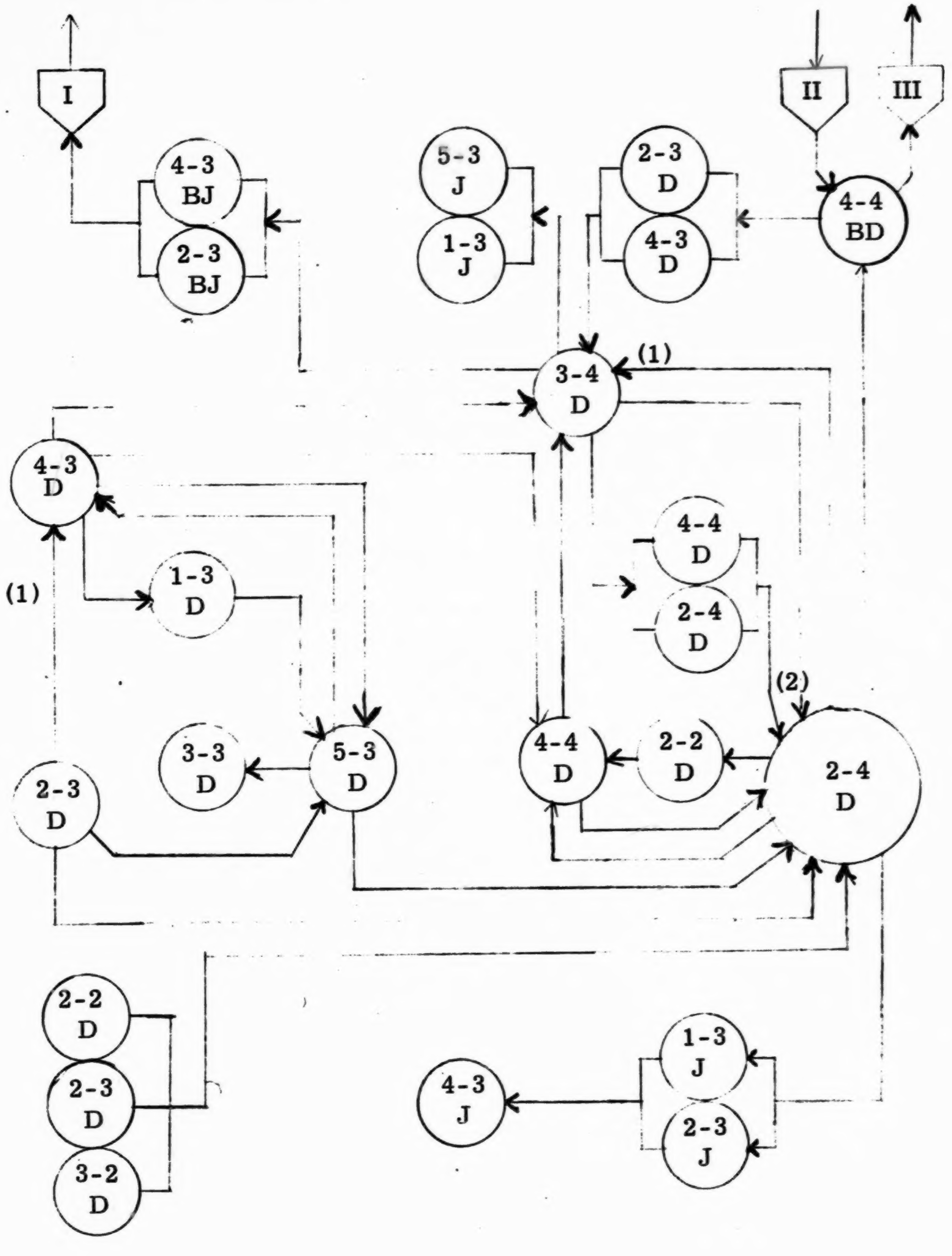

I
4-3
BJ
2-3
BJ
5-3
J
1-3
J
2-3
D
4-3
D
II
III
4-4
BD
3-4
D
(1)
4-3
D
1-3
D
(1)
4-4
D
2-4
D
(2)
3-3
D
5-3
D
2-3
D
4-4
D
2-2
D
2-4
D
2-2
D
2-3
D
3-2
D
4-3
J
1-3
J
2-3
J

Exhibit 33. Past Automation Sequence (cont'd)

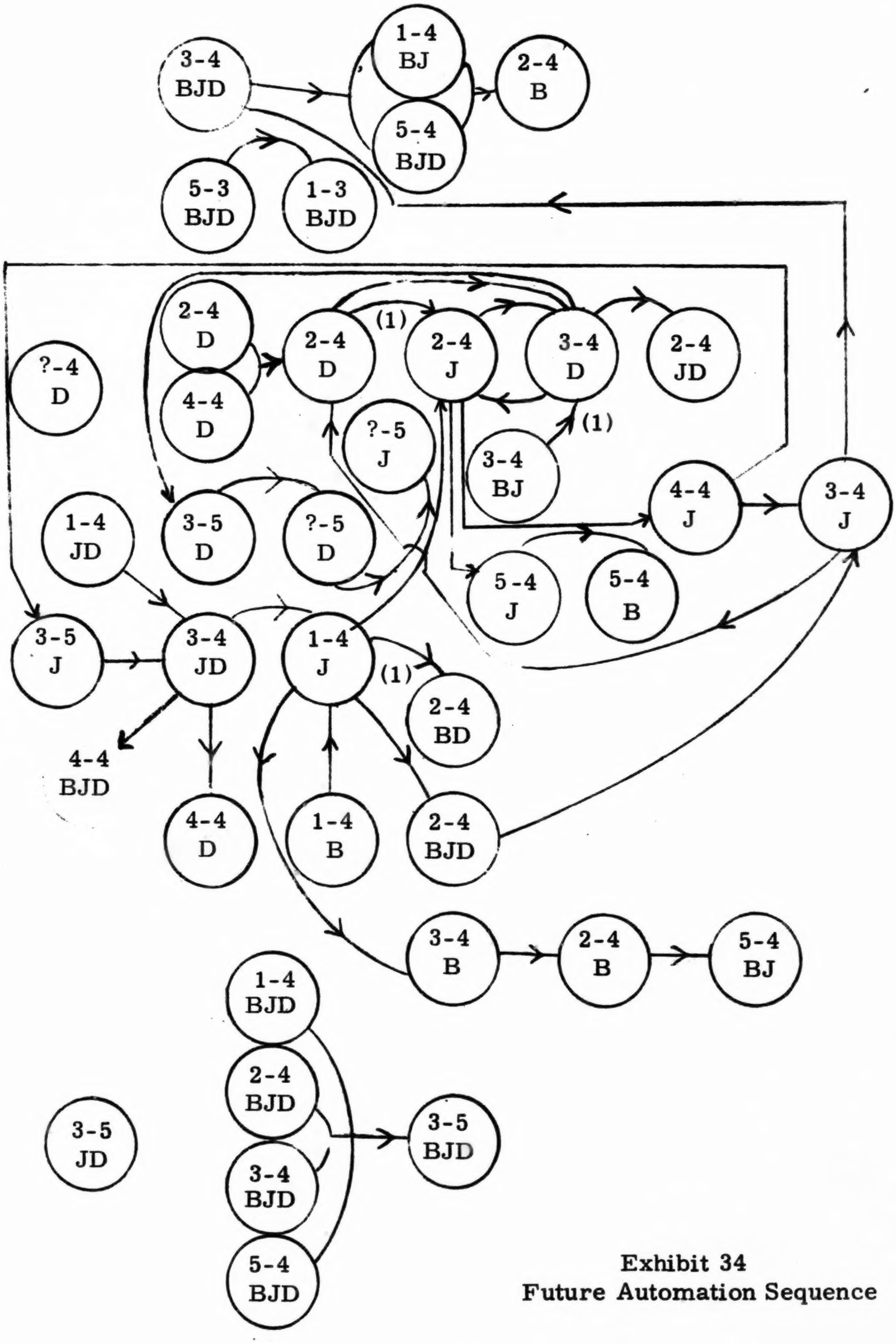

3-4
BJD
1-4
BJ
2-4
B
5-4
BJD
5-3
BJD
1-3
BJD
2-4
D
4-4
D
2-4
D
(1)
2-4
J
3-4
D
2-4
JD
?-4
D
?-5
J
(1)
3-4
BJ
4-4
J
3-4
J
1-4
JD
3-5
D
?-5
D
5-4
J
5-4
B
3-5
J
3-4
JD
1-4
J
(1)
2-4
BD
4-4
BJD
4-4
D
1-4
B
2-4
BJD
3-4
B
2-4
B
5-4
BJ
1-4
BJD
2-4
BJD
3-4
BJD
5-4
BJD
3-5
BJD
3-5
JD

Exhibit 34
Future Automation Sequence

to them which have already been made by one or more of the 19 libraries whose histories and plans make up these aggregated sequences. "Popular" transitions are noted by the relatively high numbers along connecting arrows.

(4) Association of Initial Steps with Non-Book Proportions

As pointed out in the preceding sections, the majority of the 19 automated libraries surveyed have chosen as a first automation step, the mechanization of either their journal or document activities. Since file maintenance economies are often cited as reason for automation, the file size and growth rate should be examined with regard to their respective proportions of these non-book materials.

Using available data, the following proportions of holdings have been calculated for each of the seven libraries which chose first to automate journals.

J = 1st Automation Event

No.	Library	% of holdings = journals
7	Ft. D	20.5
10	NRL	14.4
16	BLL	10.4
17	NIH	68.5
18	FDA	39.3
19	NCMHI	-
25	AEC	-

Similarly, document holdings were examined for the seven D 1st libraries.

D = 1st Automation Event

No.	Library	% of holdings = documents
4	FAA	29.8
6	MERDC	85.5
8	HDL	80.4
9	CRDL	87.8
11	NWL	73.3
12	NOL	83.9
23	RIRA	100.0

These figures indicate that the percentage of total holdings which are documents has a greater influence on the decision to automate than the journals proportion has. In other words, a library whose documents represent a large proportion of its holdings, is likely to choose documents as the first material to be automated. Another library, however, whose journals represent an equally large proportion of its holdings is less likely to choose journals as the first material to be automated. Clearly then, the selection of material to be automated is influenced by other factors in addition to holdings composition.

Growth rate of the book collection, journal collection, and document collection may therefore be examined to determine the extent to which they influence automation decisions. A quantity hereby defined as "relative input index" (R) may be calculated for each material to facilitate comparing relative input traffic and its effect on automation decisions. The relative input index for each major material - book (B), journal (J), and document (D) are defined as follows:

$$R_B = \frac{b}{b + d + 10\,(J + 1/2\ j)}$$

$$R_J = \frac{10\,(J + 1/2\ j)}{b + d + 10\,(J + 1/2\ j)}$$

$$R_D = \frac{d}{b + d + 10\,(J + 1/2\ j)}$$

Where b = annual book acquisition rate
d = annual document acquisition rate
J = number of active journal subscriptions
j = number of new journals subscribed to during a one year period

The last term in the denominator of each relative input index accounts for an average of ten issues per journal and allows for the fact that an average of one-half of the new subscriptions are received for an entire year.

Exhibit 35 presents the order with which the surveyed libraries have automated their materials versus the relative input index for each material. Twelve of the eighteen libraries for which sufficient data was available have selected the material with the largest R as the first or one of the first to be automated. Fifteen of the eighteen have selected the largest R material as either a first or second material to be automated. This clearly indicates that the material which is first to be automated is normally that with the greatest relative accessions rate.

Among the seven libraries which automated journals first, those for which R_J equalled the maximum R had R_J values of 69.5, 83.1, and 65.5. Thus, for the libraries surveyed only those for which $R_{max} = R_J > 65.5$ began their automation sequence with journals. If the condition of $R_{max} = R_J$ is met, the inequality of $R_J > 0.655$ is satisfied if and only if

$$\frac{10\,(J + 1/2\ j)}{b + d + 10\,(J + 1/2\ j)} \geq 0.655$$

	First Three Materials Auto. or Planned	R_B	R_J	R_D	Largest-R Material Automated First	Largest-R Material Automated First or Second
1 USDI	BJD-BJ-B	5.8	91.8	2.4	X	X
2 USGS	NA-BJD-NA	-	-	-	-	-
3 USBM	NA-NA-NA	-	-	-	-	-
4 FAA	D-JD-NA	15.1	62.4	22.6		X
5 BPR	JD-NA-NA	7.0	70.0	23.0	X	X
6 MERDC	D-NA-NA	14.4	29.3	56.3	X	X
7 Ft D	J-B-JD	5.5	69.5	25.0	X	X
8 HDL	D-J-NA	9.1	33.9	57.0	X	X
9 CRDL	D-NA-NA	5.0	22.0	73.0	X	X
10 NRL	J-D-BJ	5.1	43.6	51.3		X
11 NWL	D-BD-BJ	2.4	75.7	21.9		-
12 NOL	D-J-BJD	4.5	45.9	49.6	X	X
13 NBS	NA-NA-NA	-	-	-	-	-
14 ASL	NA-BJ-D	-	-	-	-	-
15 GSL	NA-BJ-D	-	-	-	-	-
16 BLL	J-JD-D	4.7	32.6	62.7		X
17 NIH	J-BJ-B	-	-	-		
18 FDA	J-NA-NA	16.9	83.1	0	X	X
19 NCMHI	J-JD-BJD	-	-	-	-	-
20 NAL	BJD-NA-NA	7.75	92.25	0	X	X
21 PIC	JD-NA-NA	0	100.0	0	X	X
22 IRS	NA-NA-NA	-	-	-	-	-
23 RIRA	D-NA-NA	0	0	100.0	X	X
24 HUD	NA-BJD-J	-	-	-	-	-
25 AEC	J-B-NA	9.1	65.5	25.4	X	X
26 STID	-	-	-	-	-	-
27 GSFC	B-BD-BJ	12.7	74.6	12.7		
28 FCC	NA-NA-NA	-	-	-	-	-
				Total X's	12	15
				Total Possible X's	18	18

Exhibit 35. Association Between Relative Input Index vs Sequence of Automation

Solving this inequality for J and rounding off results in

$$J \gtrsim 1/5\ (b + d) - 1/2\ j \qquad \text{(eq. 1)}$$

This indicates that among the automated libraries studied, those for which the number of active journal subscriptions exceeds one-fifth of the sum of the book and document acquisition rate diminished by one-half the annual number of new journal subscriptions began their automation sequence with journals.

Similarly, among the seven libraries which automated documents first, those for which R_D equalled the maximum R had R_D values of 56.3, 57.0, 73.0, 49.6, and 100. Here again a similar inequality condition was met, namely that $R_D \gtrsim 0.496$, or

$$\frac{d}{b + d + 10\ (J + 1/2\ j)} \gtrsim 0.496$$

This may be solved for d and rounded off to yield

$$d \gtrsim b + 10\ (J + 1/2\ j) \qquad \text{(eq. 2)}$$

Equations 1 and 2 express thresholds of journal subscription and document acquisition rates which have been exceeded by those Federal libraries which automated these materials with their initial efforts at library mechanization. Other libraries contemplating the development of a serials - control system or an automated reports literature program may wish to evaluate these threshold levels for their individual situations. If the J requirement of equation 1 is met, serious consideration ought to be given to automating the serials collection - even if not as the first effort or even if in combination with other materials. Likewise, if the d requirement of equation 2 is met, an automated reports-control system may be justified.

(5) Association Between Automation Sequence and Unit Service Output

In examining the past automation events with a view toward equipment utilization, each library's first, second and third event, in which a different equipment level was utilized may be tabulated as follows:

Equipment Level / Choice	2	3	4
1st	3	6	10
1st or 2nd	4	10	16
1st, 2nd or 3rd	4	10	18

This table indicates, for example, that three libraries chose an aided-manual (level 2) operation as their first automated event and four went to level 2 as either their first, second, or third new-equipment event. Among the computer users, 10 chose first to use a computer, in their initial library automation work.

Every library surveyed currently has at least potential access to an in-agency computer. One, the NAL, has a computer physically housed within the library. Time on this machine - though owned by another USDA agency - is made available to the library.

To measure the degree to which user requirements per library staff member are related with automation equipment selection, the "unit service output" defined by the ratio SU/N may be inspected. In this quantity S is the normalized service level, U is the number of active users, and N is the total library staff size. This simplified ratio may be said to express the total user demands (output workload) per library staff member. Also of interest is the number of users per library employee.

The following table presents the average values of these ratios for the first or second equipment choice.

Equipment	2		3		4	
Measure / Choice	U/N	SU/N	U/N	SU/N	U/N	SU/N
1st	25	179	96.5	755.5	139.4	917.4
1st or 2nd	25	179	86.1	688.5	106.2	739.8

Clearly the unit service output for "computer-first" libraries is significantly higher than for libraries beginning their development sequence in an aided manual mode. In every case, both U/N and SU/N are seen to increase with the level of equipment first selected. Thus, if equal equipment availability is assumed, the unit service output may be used as a indicator to aid in setting developmental priorities for equipment level selection.

In establishing a value for the unit service output, the obvious temporal variations in staff size and user population size must be taken into account, i.e., a range of values should be used for each of these variables. Similarly, the service level (normalized to ten) is a variable quantity. In fact, the specific reason for automating is often a need to expand services. Evidence of this relationship was quite clear among the 26 Federal libraries for which both automation plans (if any) and service plans (if any) were known. The truth table below shows that of the 26 libraries, 16 had both specific automation plans and plans for expanded services.

	Libraries With Automation Plans	Libraries With No Automation Plans
Libraries Planning Expansions in Service	16	1
Libraries with No Plans to Expand Services	8	1

V FINDINGS AND CONCLUSIONS

A. On Where Automation Occurs

1. The single most important administrative factor is that which embraces favorable budget and funding conditions: adequacy and direct line-item budgeting for the library in the budget of the parent agency.

2. Even with favorable budget factors high levels of automation or high level of service also seem to require a favorable condition as to organizational attachment and internal library staff and management.

3. The existence of an explicit mission statement calling for the dissemination of information outside the agency, is strongly related to the existence of automation in the library.

4. Although budget factors are important, no such clear cut relationship exists between the actual magnitude of the budget and level of service or level of automation. Technical considerations have to be accounted for as well.

5. Research and Development as either a primary or secondary agency mission does not of itself imply a high probability of a high level of automation.

6. Of 28 agency libraries surveyed, 19 were found to have levels of automation in excess of 1.00 (the non-automated state). Of these, 12 had Research and Development as primary missions with a level of 3.5; four others had a primary mission of External Service but had an automation level of 3.9. The remaining three belonged to agencies whose primary mission was Regulatory, and had the lowest average level of automation, i.e.. 3.1.

B. On When Automation Occurs

1. Libraries whose budgets are $100,000 or higher, and which have, at the same time, non-book proportions of 65% or higher, are found to have a generally high level of automation, with digital equipment being broadly applied in both functions and materials.

2. Journals and documents were the dominant first choice of materials to be automated by the libraries surveyed, seven of nineteen choosing journals and seven others choosing documents. Only one chose books. The remaining four selected combinations of materials.

3. Input processing functions were chosen for first attention, by ten of the nineteen libraries surveyed. Publication seems to have been second choice.

4. Institutions whose active journal subscriptions exceed about 20% of the combined acquisition rate for books and documents, have chosen journals as the first target in automation.

5. Institutions whose document acquisition rate exceeds the book acquisitions plus ten times the number of active journal subscriptions have chosen the document collection for the first step in automation.

6. In terms of relative holdings, a large proportion of document materials carries substantially greater weight than do journals, in the selection of material to be automated first.

C. Conclusions of Possible Import to the Non-Federal Community

It is quite clear that many of the conclusions stated above, derived from observations on government libraries will have their analogs in non-government areas. To make proper extensions it is necessary to examine the segments of the non-Federal institutions from a different classification viewpoint. Broadly, that community will embrace academic libraries over a broad spectrum of types of institution; special libraries in institutions of commerce, business, and industry; and the libraries of other public or non-profit institutions. Although it is obvious that both technical and administrative factors will play their part in development trends to be found in the non-Federal area, only technical considerations could be expected to have direct parallels. The non-technical factors would bear careful reconsideration. The whole spectrum of motivations and the administrative control and coordination picture would be expected not only to differ from that of the government, but also to vary drastically among the non-Federal sub-groups.

The forces arising from non-technical factors may be found to be stronger and more dominant than was found to be the case in the government libraries. A few speculations on the nature of analogous factors in the non-Federal area, and the possible restatement of related conclusions, are in order.

1. Budget Factors

Budget factors in the present analysis turned out to be related to the occurrence of high levels of service and automation only when all other administrative factor groups were at adequate levels; but dollar budgets of libraries seemed to relate only indirectly to the presence of high levels of automation. One would expect in commercial or industrial profit-motivated institutions, that the inverse would be true. Given the fact of a large library budget, irrespective of the funding processes, one should find correspondingly high levels of automation. However, there is no a priori way of estimating what dollar thresholds should exist.

2. Missions and Organizational Attachment

Missions and purposes of industrial organizations would be expected to be a "mixed bag" just as are those of government agencies, possibly a characteristic related to size of organization. Thus a similar lack of strong relationship would be expected. However, academic institutions should, as a group, be found to follow fairly clear patterns. The very large academic institutions should reveal some dilution of such pattern, due to the start of diversification in objectives: business enterprises and contract research and development activities that may have little or nothing to do with education as a primary mission.

Organizational attachment factors should likely show much the same influences as in government agencies.

3. The Library Technical Factors

Most of the purely technical factor relationships found for Federal libraries should likewise apply to academic or special libraries. However, proportions of holdings and acquisitions represented by various types of materials may differ widely from those found in government libraries. Thus, although the forces may be of the same kind, different thresholds for initiation of action may exist. The suggested numerical relationships characterizing the federal libraries should not be expected to apply literally.

a. Documents should be expected to be the first choice of materials for automation wherever the problem of handling reaches serious proportions, although the occasions when these problems would be found among non-Federal libraries should be fairly rare.

b. Problems associated with serials may be encountered with equal frequency in both communities; thus it is reasonable that automation of serials be undertaken as a first step within non-Federal libraries, especially universities, as within the government.

c. It is likely that input processing problems would cause this functional area to be the unique first choice for attention, for here there should be almost no dinstinction between the Federal and non-Federal libraries.

d. Sequences of automation as shown in the analysis may likely bear little similarity regarding equipment levels. The availability of machinery is no doubt a highly variable factor in commercial and academic institutions, while digital equipment was found to be consistently available (although not uniformly accessible) in all government agencies surveyed.

Partial List of References

1. Altmann, B. and Riessler, W. A., Theory, Testing and Mechanization of the ABC Retrieval System, American Documentation, January 1969.

2. Booz, Allen Applied Research, Inc., Mechanization Study of the Army Biological Laboratories Technical Library, Fort Detrick, Md., September 1966.

3. ____________, Mechanization Study of the Technical Library, U.S. Army Edgewood Arsenal, September 1966.

4. ____________, Mechanization Study of the U.S. Army Harry Diamond Laboratories Technical Information Office, Washington, D.C., September 1966.

5. ____________, Mechanization Study of the U.S. Naval Ordnance Test Station Library, China Lake, California, September 1966.

6. ____________, Mechanization Study of the Technical Library, U. S. Naval Weapons Laboratory, September 1966.

7. Burnette, Paul J., The Army Library, The Library Quarterly (date unknown)

8. Butler, R.W. and Schofield, Paula Z., Simultaneous Production of Catalog Cards and Computer Input, U.S. Department of the Army, Ft. Detrick, Md., February 1967.

9. Cohen, S.S., and Uretz, L. R., RIRA: Storage and Retrieval of Tax Law Data, Law and Computer Technology, September 1968.

10. Evans, Luther H., et al., Federal Departmental Libraries, Washington, D.C., Brookings Institution, 1963.

11. Federal Aviation Administration, FAA List of Medical Periodicals, October 1966.

12. Federal Communications Commission, List of Printed Publications, Adm. Bulletin No. 1, March 1968.

13. ____________, Publications and Services, Information Bulletin No. 6-G, October 1967.

14. Federal Council for Science and Technology, Selected Mechanized Scientific and Technical Information Systems, COSATI, 1st Edition, April 1968.

15. Freeman, Elsa S., Urban Planning and Housing Literature in 1963, Special Libraries, Vol. 55, No. 3, March 1964.

16. General Services Administration, Office of the Federal Register, United States Government Organization Manual, 1968-69.

17. Highway Research Board, Highway Research Information Service: A Summary of HRIS Operations, Schedules and Fees, July 1967.

18. Kruze, Carolyn J., The Use of Electronic Computers for Information Retrieval at the Naval Ordnance Test Station, Special Libraries, February 1963.

19. Kruzas, Anthony T., (Editor), Directory of Special Libraries and Information Centers, Second Edition, Gale Research Company, Detroit, Michigan, 1968.

20. Lamkin, B.E., FAA Library and Information Retrieval Activities: Program Plan 1966-67, July 1966.

21. Mohrhardt, Foster E., The Library of the U.S. Department of Agriculture, The Library Quarterly, Vol. 27, No. 2, April 1967.

22. National Aeronautics and Space Administration, How to Use NASA's Scientific and Technical Information System, U.S. Government Printing Office, 1966.

23. _______________, NASA Scientific and Technical Information Facility, Monthly Report of Operations, February 1969, TISCO, 1969.

24. National Science Foundation, Scientific Information Activities of the Federal Agencies, National Aeronautics and Space Administration, NSF 64-29, March 1965.

25. Nicolaus, John J., Presentation on DOD-NAVY-NAVSHIPS Libraries in the STINFO Program, Scientific Documentation Division, Naval Ship Systems Command, U.S. Department of the Navy, February 1969.

26. Segarra, Carlos O., USA ERDL, *An Approach to Cost Effectiveness of a Selective Mechanized Document Processing System,* (ATLIS Report No. 12), March 1967.

27. Stegmaier, R. B., *Data Banks and Defense,* Armed Forces Management, Vol. 14, No. 11, August 1968.

28. ______________. *The Defense Documentation Center,* Defense Management Journal, Vol. IV, No. 1, Winter 1967-68.

29. U.S. Atomic Energy Commission, *List of Journals in the AEC Library, Germantown and Bethesda,* March 1968.

30. ______________. *Science and Management,* February 19, 1969.

31. ______________. *Science and Society,* February 20, 1969.

32. ______________, *Science and Technology,* February 19, 1969.

33. U.S. Department of Agriculture, *Services Offered by the National Agricultural Library,* December 1966.

34. U.S. Department of the Army, MERDC, Technical Information Division, Technical Document Center, *Accession List,* September 1968.

35. ______________. *U.S. Army Research and Development Information Program,* USARO, OCRD, June 1968.

36. ______________. *Welfare, Recreation, and Morale Army-Wide Library System,* USAR No. 28-85, April 1968.

37. U.S. Department of Defense, *Centers for Analysis of Scientific and Technical Information,* DOD Instruction No. 5100.45, July 1964.

38. ______________, Defense Documentation Center, *Organization, Missions and Functions,* DSA-DDCM 5810.1, May 1968.

39. ______________, *Defense Documentation Center for Scientific and Technical Information (DDC),* DOD Instruction No. 5100.38, March 1965.

40. ______________, *Research and Technology Work Unit Information System,* DOD Instruction No. 7720.13, April 1968.

41. U.S. Department of Defense, Defense Supply Agency, Defense Documentation Center Mission Statement, DSA Regulation No. 5805.10, March 1967.

42. U.S. Department of Health, Education and Welfare, Administrative Functions, Practices and Procedures, Regulations Under the Federal Food, Drug, and Cosmetic Act, Part 2, Title 21, Code of Federal Regulations, February 1966.

43. ______________, Food and Drug Administration, Excerpt from Annual Report, 1967.

44. ______________, Office of Education, Survey of Special Libraries Serving the Federal Government, 1968.

45. U.S. Department of Housing and Urban Development, Periodicals Received in HUD, Subject Index 1969.

46. U.S. Department of Interior, Geological Survey, Abstracts of North American Geology, October 1968.

47. ______________, Geological Survey, Geophysical Abstracts, No. 262, November 1968.

48. ______________, Publications of the Geological Survey, 1962.

49. U.S. Department of the Navy, Naval Weapons Laboratory, Document Bulletin, October 1968.

50. ______________, Naval Weapons Laboratory, Holdings of Periodicals in the Technical Library, 1968.

51. ______________, Naval Weapons Laboratory, New Books and Periodicals, NWL Technical Library, Vol. 34, November 1968.

52. U. S. Department of Transportation, Highway Research and Development Studies, November 1967.

53. ______________, Study of Library Services for the Department of Transportation, October 1968.

54. U. S. Department of Treasury, Internal Revenue Service, Office of the Chief Counsel, Annual Report, 1968.

55. Vincent, Col. D. L., et al, An Approach to Information and Data Systems Design, USA OCRD, May 1967.

APPENDIX A

SUPPLEMENT TO METHODOLOGY

I. SPECULATIVE MEASURES OF LIBRARY INTEGRATION

To measure the degree of integration of a library or information center requires a complete, detail system flow chart of all operations. Since charts of this type are not available, other methods of determining an integration score were investigated.

The "integration" of a system is being viewed as a measure of a near intangible - "Just how smooth is the work flow?" In order to estimate "smoothness of flow" the interfaces between functions must be examined. Thus, for example, if TAB cards are produced in an automated book-processing operation, one might expect to find similar cards used for a different purpose in an automated circulation-control system in the same library. If the cards are well-designed, no keypunching or duplicating will be required to use them efficiently in either operation. If redundant filing operations are bypassed via multi-purpose cards, the work flow is "smoothed" even more.

Conversely, if TAB cards are produced at the time of checkout for circulation control, but the book-processing activity is entirely manual, one might expect to find a less integrated work flow between these two operations.

This rationale can be applied to the six major functions of the library. Exhibit A-1 illustrates "integration-payoff" grades assigned to the fifteen possible combinations of these library functions. The payoff from linking processing with circulation, for example, has been given the highest grade of A, while the link between publishing and processing receives the lowest grade - C.

Since detailed descriptions of each library's operating procedures were not available, the presence or absence of these links could not be specified with complete accuracy. To score each link, an equipment (level) - dependent linking rule was adopted. In essence, this rule states that any two functions which are performed by the library should be linked if they are at the same or adjacent levels of automation. In addition to the adjacency requirement, however, is the desirability of linking any two functions performed via EAM or computer techniques (levels III, IV, and V), since integration can safely be assumed to be higher where functional interfaces are crossed without converting records to or from digital form. Linking is bi-directional, so that a link between functions 1 and 2 is allowed in either of the following cases:

- Function 1 is at level 1 and function 2 is at level 2
- Function 1 is at level 2 and function 2 is at level 1

Of course these two functions would also be linked if both were at the same level, be it 1 or 2, or any other level; or if both were at any of the levels 3, 4, or 5.

To score a library, one simply inserts the automation level for each function in the appropriate box on the worksheet (Exhibit A-1). Then, the letter grade of each admissible link is encircled. In the exhibit, Library X, for example, performs functions 1 and 2 at level 1 and therefore gets an A grade for the link between these functions. He performs functions 1 and 3 at levels 1 and 4 respectively and therefore gets no grade for the 1-3 link, since these levels do not meet the adjacency requirements.

Scoring each library depends on the number of links of each grade which it has. A set of inequalities can be established to determine the relative integration among libraries. A portion of this set follows and shows, for example, that a library with two B links is "more integrated" than one with one A and one C link or two C's or one B and one C.

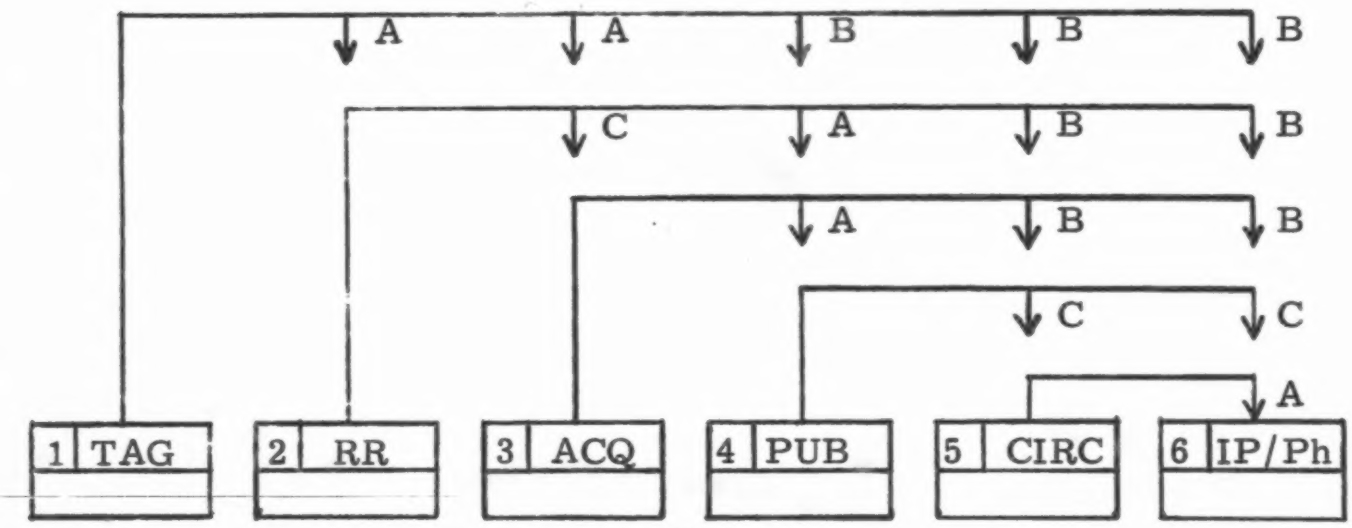
$$A > B > C$$

$$\begin{array}{ccccc} (A+A) & > & (B+B) & > & (C+C) \\ \vee & & \vee & & \parallel \\ (A+B) & > & (A+C) & > & (B+C) \end{array}$$

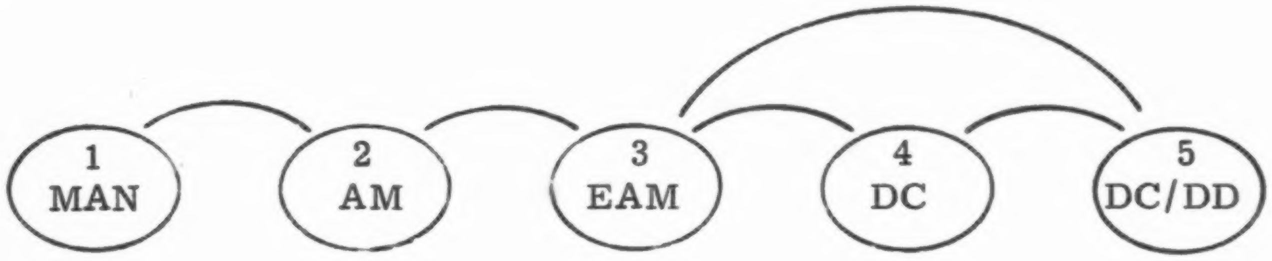
$$\begin{array}{ccccc} (A+A+A) & > & (B+B+B) & > & (C+C+C) \\ \vee & & \parallel & & \wedge \\ (A+A+B) & > & (A+A+C) & > & (B+B+C) \\ & & \vee & & \parallel \\ & & (A+B+B) & = & (C+C+A) \end{array}$$

To simplify the scoring procedure, however, these inequalities can be readily converted to the numerical scores, which are shown in the table of Exhibit A-1. The final, relative score for each library is then arrived at merely by referring to this table. Library X, for example, has two A's (worth 7 points), three B's (worth 3 points), and one C (worth 1 point) for a total score of 16.

Clearly, the maximum possible integration score is 44. This score will be reached by all libraries which are at the same or adjacent levels of automation in each function. Therefore a library which is entirely manual will be scored 44, as will one which is entirely automated at the highest level. In this light, the integration score is seen to be indicative of "steady states" of integration. A more elaborate technique for integration scoring can be devised to operate as a step function, rather than as a continuous rise, but this technique is more refined than present data justified. Thus, a


A
A
B
B
B
C
A
B
B
A
B
B
C
C
A
1 TAG
2 RR
3 ACQ
4 PUB
5 CIRC
6 IP/Ph

a. Integration Pay-off Grades


1 MAN
2 AM
3 EAM
4 DC
5 DC/DD

b. Admissible links for automation

c. Numerical values for link combinations

Combinations		One	Two	Three	Four	Five	Six	Seven
Link	V	Vx1	Vx2 +1	Vx3 +2	Vx4 +3	Vx5 +4	Vx6 +5	Vx7 +6
A	3	3	7	11	15	19	23	27
B	2	2	5	8	11	14	17	20
C	1	1	3	5	7	9	11	13

Library Name ____

SCORE = ____A's + ____B's + ____C's

Total = _____ + _____ + _____ = _____

Exhibit A-1. Level of Integration: Method and Worksheet simplified comparison of library integration can be drawn if totally manual libraries are ignored - since nearly all other libraries surveyed are now non-steady-state with regard to automation (i. e., they are in the process of making changes in their automation level for one or more functions).

II. LEVEL OF SERVICE

The descriptions of levels of service that are given in this section (Exhibit A-2) constitute an extension of the method proposed by Strable.* His work listed functions that would be done by a library which offered services judged to be of a Minimal, Intermediate, or Maximal level of service. The extension presented here is based on inversion of this idea, asking, "To what level should each of the functions be performed if the library desires to consider itself as Minimal in service, Intermediate, or Maximal?". Also, an attempt was made to break down large generic functions into the component activities of which they exist.

Some functions listed here are obviously not of a "service" nature, but, rather, pertain to internal library operational functions. These do not fit the scheme too well; some, in fact, receive a "Yes" at all three levels, meaning that they are done at all levels, but that the distinctions among levels can only depend on types of input materials (which may be peculiar to a given library) and the processing techniques used. This is clearly unsatisfactory, but no further attempt is made here to segregate the list so that it is unambiguous.

---

*Strable, Edward, G., Editor, Special Libraries, a "Guide for Management." New York, Special Libraries Assoc., 1966.

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
A. Administration			
1. Supervision	Yes	Yes	Yes
2. Work Measurement	Not done	Yes	Yes
3. Reporting	Yes	Yes	Yes
4. Personnel & Staff	Not done	Yes	Yes
5. Training	Not done	Yes	Yes
6. Accounting	Not done	Not done	Yes
7. Planning, Programming and Budgeting	Not done	Limited to planned collection build-up; library organization and system improvement.	Full scope: for product & service offerings, based on evaluative studies; development of implementation plans, and budget.
B. Requirements Analysis			
1. Collection Analysis	Not done	Review of collection for areas of weakness(*)	Matching holdings to current needs. Identify probable future weak areas for advance build-up.

Exhibit A-2 Extended Levels of Service

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
2. User Analysis	Not done	Maintenance of simple usage statistics by which to judge user, and organizational needs.	Following changing organizational activities, & development of probable related needs; anticipating future requirements.
3. Service Evaluation	Not done	Not done	Systematic program for assessing user reaction to service.
C. Selection			
1. Source Identification			
a. purchasing	Maintain standard catalogs, book lists, books-in-print, etc. (*)	Develop direct contacts and purchasing arrangements with suppliers of library materials.	Establishes contacts with dealers in unusual published materials, out of print books, etc.
b. borrowing	Maintain general knowledge of local library resources (*)	Maintain broad familiarity with nationwide library resources in pertinent fields. (*)	Establishes broad and active network for Inter-Library Loan.

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
c. regular distribution	Responsive only.	Initiates contacts with formal distribution services.	Develops exchange agreements, establishes contact with other organizations in similar areas of interest but with no formal external distribution.
d. referral	To the extent consistent with Clb(1) only.	Consistent with Clb (2)	Maintains files and knowledge of subject sources, including specialists and experts, on selected areas of interest. (*)
2. Item Identification			
a. purchasing	same as C1a(1)	Based on Bl(2) using subject guides or requested literature search results.	Based on B1(3) and B2(3).
b. borrowing	In response to direct requests only.	Same as C2a(2)	Based on literature searches and user analysis.

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
c. acceptance (screening)	Relevance and duplication check consistent with B1 and B2 at appropriate level.	As in C2c(1).	As in C2c(1).
d. retention (weeding)	Not done	Weeding of unnecessary duplicates or damaged materials.	Weeds out, destroys or retires unneeded, irrelevant, or out-of date materials. As B2(3).
3. Development of Selections Policy	Not done	General policy based on organizational needs, by broad subject area.	Written, dynamic, selection policy, covering methods of feed-back, analysis of user requirements, and specific practices for source and item selection.

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
D. Acquiring Input 1. Order/Request			
a. order preparation	Order based on data supplied by requester or publishers' catalogs and announcements. Simple request letters and/or organizational purchase order.	Develop order form letters; include extended bibliographic data. May use facsimile of established catalog citation.	Establish individual ordering procedures with suppliers. May include precataloging.
b. order/request	Obtains individual administrative or technical approval for each request.	Establish and maintain current procurement authority files for groups, and individuals.	Same as D1b(2). Discretionary authorization for expenditures against established funds.
c. claims generation	Back-ordering; missing issues, etc.	As in D1c(1).	As in D1c(1).
2. Receiving	Receipt of shipments; check of condition.	As in D2(1) (*)	As in D2(1) (*)

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
3. Records Maintenance			
a. financial	Not done (Invoices transmitted to other office for processing.)	Maintain running records of purchases and expenses.	Develops billing procedures with vendors; maintains current financial status records negotiates discounts.
b. order transactions	Establishes and maintains an elementary order record. (*)	Establishes and maintains formal order transaction files to facilitate checking, back-ordering, and claim generation.	Integrates order transactions into status file system to control input, avoid duplicate purchases or subscription lapses.
E. Processing of Input			
1. Accession Numbering	Yes	Yes	Yes
2. Descriptive Cataloging	Establishes Author/Title entries. (*)	Inclusion of full bibliographic citations, based for example, on LC or other standard format.	As in E2(2), but including also selective component descriptive cataloging.

Exhibit A-2. **Extended Levels of Service** (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
3. Assignment of Classification	Not done	Use of LC or Dewey or other standard classification. (*)	Uses self-generated or a tailored classification scheme. (*)
4. Subject Indexing/ Cataloging	Not done	According to published subject heading lists (*) or other schemes of organization. Includes special materials. (*)	According to subject headings, classification schemes, or thesauri modified or developed especially for the library. (*)
5. Abstracting	Not done	Not done	Selectively.
6. Prepare Analytic Notes	Not done	Selectively.	Selectively.
7. Prepare Catalog (make or buy)	Prepares Author/Title Catalog	Ordering printed cards; uses published indexes, or catalogs to obtain data for cards.	Accepts, modifies, or devises (original) system of catalog preparation to suit organizational needs.

Exhibit A-2. Extended Levels of Service (cont'd)

3

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
8. Catalog maintenance	Consistent with minimal level.	Consistent with intermediate level.	Consistent with maximal level and type of catalog (card/book/tape, etc.).
9. Maintain catalog authorities	Not done	Adopts standard corporate or personal author and subject heading lists.	Accepts standard or modified-standard authorities; or devises and maintains own authority lists(subject/author/title, etc.).
10. Item processing (labeling, pocketing, microfilming, etc.)	Yes, as appropriate.	Yes, as appropriate.	Yes, as appropriate.
F. Reference and Retrieval			
1. Fact retrieval	Yes	Yes	Yes
2. Bibliographic retrieval			

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
a. Search preparation	Not done	Translation of query into accepted subject terms.	Generation of logical search strategies if appropriate.
b. User profiling	Maintain lists of broad client subject interests for routing of publications. (*)	As in F2b(1) (*)	Solicit user subject profiles for SDI.
c. Searching	Verification of requested references. (*)	Conduct comprehensive literature searches on request. (*)	Evaluative, comprehensive literature searches both on request and on own initiative. (*) Matching of current material to specified user interests (SDI).
3. Item Retrieval	Yes	Yes	Yes

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
4. "Sources" Retrieval	Published and local library holdings for purchase, referral, and ILL.	As in F4(1) except of nationwide scope.	As in F4(2) except including subject experts and sources of unpublished materials or special materials. (*)
G. Library Product Preparation			
1. Accessions Lists	Author/Title listings only.	Current literature received, in various arrangements; may include abstracts if available.	As in G1(2) except include selective preparation of abstracts.
2. "Contents"	Not done	Use printed or reproduced Tables of Contents.	Same as G2(2).
3. "Bibliographies"	Not done	Selective; on request only.	Same G3(2).
4. SDI Notices	Not done	Not done	As a result of F2c(3).

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
5. Indexes	Not done	No (except possibly book catalogs).	Regular specialized indexes; KWIC indexes and book catalogs.
6. Abstract Bulletins	Not done	Selected and compiled from available abstracts	Prepared from abstracts written in-house.
7. Evaluative Reviews	Not done	Not done	Yes, selected subjects.
8. Copy request fulfillment	Yes	Yes	Yes
H. Circulation			
1. Routing	Not done	Yes, limited distribution.	Yes, unlimited.
2. Circulation control	Maintain simple system of check-out, recall, and return.	Establish and maintain formal check out, recall and return system, including periodic inventory-type listings.	As in H2(2), including multiple approaches (e.g., author/title, name, etc.).

Exhibit A-2. Extended Levels of Service (cont'd)

FUNCTION	LEVEL OF SERVICE		
	(1) Minimal	(2) Intermediate	(3) Maximal
I. Collection Maintenance (includes shelving, pulling, storage, & physical accountability)	Yes	Yes	Yes

Exhibit A-2 Extended Levels of Service (cont'd)

III. DATA COLLECTION TOOLS

In the four subsections that follow, each of the interview guides and records used in the study is presented. There were four of these:

- Guide for Administrative Interview;
- Administrative Interview Record;
- Technical Interview Guide; and
- Technical Interview Record.

The material shown in sections B and D, the Record forms, has been condensed to remove white space as much as possible.

A. Guide for Administrative Interviews

The final version of the Guide is presented in this section. This Guide was first used as a discussion guide during initial telephone contacts with prospective interviewees, and then mailed to the selected persons well in advance of the date of the interview for his perusal.

GUIDE FOR ADMINISTRATIVE INTERVIEWS

STEP 1 The purpose of this step is to determine the details of the Agency's mission and organizational structure.

a. What is the organization of which the headquarters is a part? Obtain or develop an organization chart of the parent headquarters.

b. How is this activity organized? Obtain or develop an organization chart of this activity. Show the location of any library or other major information activity.

c. Obtain or develop a statement of mission or purpose for both (a) parent and (b) local activity.

d. Trace the history of the agency with respect to major organizational changes. What has been the impact of these on the library or information activities?

STEP 2 The purpose of this step is to establish the administrative relationships of this agency to its higher headquarters, to adjacent headquarters, and to subordinates. Identify advisory, supervisory and coordination relationships.

STEP 3 The purpose of this step is to determine the responsibilities this agency has with respect to information activities.

a. Identify what the major internal information activities are.

b. Clarify the responsibilities for coordination among libraries, documentation centers and information centers located within this agency. Which of these has the responsibility for distribution of materials generated within the agency?

c. What are the responsibilities assumed by this agency with respect to interfacing with outside (federal or non-federal) agencies?

STEP 4 The purpose of this step is to characterize the planning processes employed by the agency, and their effect on the information activities.

a. Is there a formal planning body (or process) which involves the planning, programming, and budgeting for library or other information activities?

b. Characterize the manner in which such plans are formulated or developed.

c. Has there been an increasing tendency toward formalization of the planning process with respect to library and information activities? Why has this been necessary?

d. What is the status of plans that may now exist for library and other information activities? Describe. Include especially those involving automation.

e. How are these plans to be implemented, with respect to finances and staff requirements? What resources have been expended thus far?

STEP 5 Future Plans

a. Describe the process by which the agency's information activities are evaluated. What are the present objectives?

b. What changes in information activities are involved in reaching the objectives? Changes in relationships? Changes in operations? Changes in services offered? Emphasize the involvement of automation in any of these changes.

c. Identify any plans for information networks within the agency, or with other agencies. What is the nature of these?

d. Describe the resource requirements connected with existing plans, including money, personnel, and time.

B. Administrative Interview Record

This Record was prepared for use by the interviewers. It was not sent to selected interviewees in advance of the conversation, nor necessarily were shown to the person during the conversation. It is keyed by Step and Paragraph number to the Guide which was provided in advance.

TRENDS IN LIBRARY AUTOMATION

Administrative Interview Record

Department/Agency

Interviewee(s): Name
Title
Name
Title

IDC Interviewer(s)

Date of Interview

Type of Interview

STEP 1 Mission and Organization

1a. Organization of Parent Hq: Organizational components of the Parent, including the Element being examined. (Prepare, in advance, a tentative chart showing this, and use in confirmation. Locate any information activity within this structure of which the respondent has knowledge.)

1b. Obtain, or develop, an organization chart of this Element. Locate any library or other information activity therein.

1c. Missions or purposes.

(1) Prepare a hypothetical mission statement, in advance of the interview, covering what is known of this Element and its Parent.

(2) Obtain from the respondent a more explicit statement of the Parent mission.

(3) Purposes and responsibilities of this Element, (i.e., the element served by the library by virtue of its mission statement).

1d. History of this Element and its Parent in respect to:

(1) Major organizational changes (e.g., bureau consolidation, transfer of function, change in responsibility, element reorganization).

(2) Effects on information activities.

STEP 2 Relationships

2a. Internal Agency Relationships

(1) Relationships among organizational elements in your "agency" which are supported by the library/information center.

Related Elements		Type of Relationship (Serial/Collateral/Both)

(2) Relationships among organizational elements within the "office" to which the library (IC) reports.

2b. Centralization (Operational Mode)

(1) This Element is:

strongly centralized ________
moderately de-centralized ________
very de-centralized ________

(2) Geographical Centralization:

centralized ________
dispersed ________

(3) Functional Centralization:

Function	Degree of Centralization
Planning	
Programming	
Control	
Others	

2c. Communication Relationships

(1) To whom does this Element report

a. in line authority?

b. as supervisor?

c. in advisory capacity?

(2) With whom is routine coordination effected? For what functions?

2d. Lateral Relationships (own Element)

		Yes	No
(1)	Coordinate with numerous laterally related elements.*	( )	( )
(2)	Coordinate only with elements in same tree.**	( )	( )
(3)	Coordinate only with elements at same organizational level.	( )	( )
(4)	Coordination channels are pre-established.	( )	( )
(5)	Coordination channels are direct.	( )	( )
(6)	Functional (Operational) relationships are "consecutive" or serial.	( )	( )
(7)	Functional relationships are "collateral".	( )	( )
(8)	Elements relate to each other through non-federal interface.	( )	( )
(9)	If yes, Elements relate via different facets of common object space.	( )	( )
(10)	Elements relate through subject or discipline commonality.	( )	( )
(11)	Elements relate through common function.	( )	( )

---

* Applies to organizational elements supported by library (Step 2: para. a(1)).

** Applies to organization elements within office to which library reports (see Step 2: para. a(2)).

2e. Vertical (Upward) Relationships

Yes No

(1) Operate under tight control of superior headquarters. ( ) ( )

(2) Element sits in multiple chain of command. ( ) ( )

(3) Element has reporting responsibilities to other than immediate superior. ( ) ( )

(4) Element has complete PPB responsibilities for own operations. ( ) ( )

2f. Vertical (Downward) Relationships

(1) What is the immediate span of control? (Is it more than 5?) ( ) ( )

(2) Strong control over subordinates is necessary. ( ) ( )

(3) Lines of authority to subordinates are clean. ( ) ( )

(4) Coordination among subordinates takes place via this office. ( ) ( )

2g. Lateral Relationships among Subordinates

(1) Subordinates functions are consecutively related. ( ) ( )

(2) Subordinates are highly dispersed (geographically). ( ) ( )

(3) Subordinates are functionally interdependent. ( ) ( )

2h. External Interfaces

(1) Other government coordination

- (a) federal agencies ( ) ( )
- (b) state ( ) ( )
- (c) local ( ) ( )

(2) Non-government ( ) ( )

STEP 3 Information Activities

3a. Principal Information Activities. Identify and briefly describe the functions served by all library or information center activities within the area of responsibility of the respondent.

	Activity	Purpose
1.		
2.		

3b. Relationships among the libraries, DC's, IC's or IAC's

(1) Must they coordinate?

(2) Are they mutually supporting? Dependent?

(3) Are they compatible (e.g., programs, data base, etc.)?

3c. External Interfaces

(1) Federal

	Identity	Relationships
(a)		
(b)		
(c)		

(2) Non-Federal

	Identity	Relationships
(a)		
(b)		
(c)		

STEP 4 Planning Functions

4a, b. Formal Planning for Library and I. C. Development

(1) Technical Planning:

- by library/IC staff (yes/no) ______________
- by a joint staff group? Who? ______________
- contract support? (yes/no) ______________
- who has review responsibility? ______________

(2) Budgeting

- by an administrative group composed of .... ______________
- by library/IC staff with administrative review (yes/no) ______________

(3) Funding

- thru funds of Parent (yes/no) ______________
- special line item (yes/no) ______________

4c. Recognition of Planning Requirements

(1) Are planning processes formal?

(2) Do written plans exist?

4d. Development Status and Plans

(1) Objectives thus far achieved - ______________

____

____

____

(2) Achievements on schedule? ______________

(3) Are results as expected? ______________

(4) Necessary plan changes ______________

(5) Reasons ______________

____

____

4e. Implementation Plan

(1) Who has implemented past plans?
- In-house ____________________
- Contractor ____________________

(2) Have cost and time schedules been meet? (yes/no) ____________________

(3) Have staff requirements increased? ____________________

(4) Has reorganization been required? ____________________

(5) L/IC is at T/O strength? ____________________

(6) Have automation programs been generally viewed as successful? ____________________

(7) User response to services? ____________________

STEP 5 Future Plans

5a. Development Program Evaluation

(1) Objectives	(2) Scheduled Completion Date
______	______
______	______
______	______

(3) How will progress be measured? Value?

5b. Impact of Plan Implementation

(1) New service capabilities expected? ______

______

______

(2) Principal Benefits

- satisfies unfulfilled need: ______
- improved quality of service: ______
- reduced operating costs: ______
- expanded capacity: ______
- other ______

(3) Other future plans (e.g., more space, larger staff, more money)

5c. Networks

(1) Planned for intra-agency? ______

(2) Planned for inter-agency? ______

(3) With whom? (list) ______

	Element/Agency	Type of Link
(a)	______	______
(b)	______	______
(c)	______	______

5d. Resource Requirements

(1) To implement plans — amounts

- Technical Support (contract or in-house) ________________
- Money ________________
- Time ________________

(2) To operate — amounts

- Additional Staff
  - Library ________________
  - ADP ________________
- Money (annually) ________________

C. Technical Interview Guide

The Guide shown on the following pages served two purposes: first, it was used to provide subject scope in exploratory telephone conversations with prospective interviewees; and second, it was sent to the selected interview candidate in advance of the meeting to give him an opportunity to develop information in the areas to be discussed.

TECHNICAL INTERVIEW GUIDE

STEP 1 Characterization of the Library Internal Organization, Staffing, and Budgeting

a. Obtain an organization chart of the library. Has it changed recently?

b. Using Table 1 as a guide, show the distribution of activities and staff based on the organization chart. For decentralized activities show distribution of functions/activities, staff and location of each branch or detached unit. Identify activities automated or to be automated.

c. Characterize staff generally in terms of educational background, experience (years and type), including ADP training.

d. Identify the source of funds for library activities. Determine adequacy of budget for overall operation, including automated activities. Is budget control the responsibility of the librarian?

STEP 2 Characterization of Present and Past Relationships of Library with Management, Computer Personnel and Users

a. Locate the library within the parent organization. Has this changed in the last ten years? Is the location considered a problem? Characterize the present roles of management with respect to library operations.

b. Where is the computer systems staff located organizationally? How large is it? What are its functions?

c. Characterize the relationship between library and management analysts, computer systems personnel, and operations.

1. during development stages of any newly instituted program; and
2. During operational stages.

d. Have any changes in relationship with parent organization resulted from implementing new operating procedures or automated systems?

e. Characterize relationships with other Federal or non-Federal libraries, and other information activities.

STEP 3 Characterization of the Library's Present Operation

a. Operations

1. Which library functions listed in Table 1 are automated? What equipment is used? What are the major inputs and outputs of the functions?

2. Who owns the equipment? Where is it located? What proportion of its time is allocated to the library?

3. What programming language(s) is(are) used? Could the present software be made available to other libraries?

4. What problems presently exist in the library that have arisen as a consequence of your program of automation? What has been the reaction of the users to the automation program?

5. What benefits have derived from the program of automation? For the users? The library staff?

b. Collection

1. What is the approximate size and acquisition rate of your collection? (If detailed numbers are unknown, give estimates, aggregated when necessary.)

2. Estimate approximate usage rates of your services (e.g., reference and circulation).

3. How is the collection distributed by subject? Use your own appropriate subject breakdown.

ACQUISITION

Select books, periodicals, other materials; obtain approval of expenditure or need-to-know; order books, periodicals, other publications; check in books and periodicals; match and inspect shipment; receive technical reports; order and check in microforms.

CATALOG AND CLASSIFICATION

Assign classification numbers; assign control or accession numbers; prepare main entry/subject catalog cards; order printed catalog cards for books; maintain catalog authorities; assign subject heading terms (books/reports); perform subject indexing for periodical articles; prepare abstracts or analytical notes; filing of entries.

REFERENCE AND RETRIEVAL

Answer "ready" reference questions; prepare bibliographies; maintain specific area reference files; maintain user interest profiles; perform literature searches; translation.

CIRCULATION

Route new issues of periodicals; circulate classified books, periodicals, reports; interlibrary loan transactions; maintain borrower's file; prepare/distribute acquisitions lists; duplicate/circulate Table of Contents for periodicals; reproduce hard copies from microform.

INVENTORY OF COLLECTION

Control of classified reports: receiving, down grading, destruction, inventory; inventory of periodical/book collection; statistical accounting.

Table 1. Examples of Activities

Type of Item	Number of Items	Annual Acquisition Rate	Annual Usage Rate	
			Reference	Circulation
Books				
Periodicals				
Documents & Reports				
Microform (Specify Type)				

Table 2. Holdings; Acquisition & Usage Rates

STEP 4 Past Operational Problems and the Planning Process

a. Operational Problems

1. Past problem areas in: staff limitations; procedures; scheduling; support; materials or labor costs; quality of service; additional service requirements. Were they beyond the library's control? How were the library functions affected by these problems?

2. Did these problems lead to an analysis of the library and its role in the agency? Who was involved - management, library staff, contractor? Did a system development plan result? Where did the initiative for the automation program begin?

b. Plan Implementation, System Development and its Effects

1. What were the system development objectives and who was responsible for their formulation? Did the resultant system satisfy all the objectives?

2. What measures are used to estimate the success or value, of improvements resulting from new systems introduced, in relation to resource utilization, performance, or quality of service?

3. (a) How was system design accomplished - with contract support, library staff, computer staff? Were costs shared during design and development? How?

   (b) Are expenses for operation shared by other organizations?

4. Have existing systems or programs been adopted for use by the library? What were the problems of adapting these to your use?

5. Was consideration given to interfacing with information systems existing elsewhere in the Federal Library Community: common unit record format (e.g. MARC); common vocabulary; equipment compatibility; and common data base?

6. In what order were the library functions automated?

7. Were unexpected problems encountered during development and implementation?

STEP 5 Characterization of Future Plans

a. Describe any changes planned in the automation program. Where did the initiative for these changes originate - with the library staff, management, computer personnel or the users?

b. Will any of these changes affect the internal organization of the information activity? (For example, in numbers and types of staff.)

c. What will be the effect of these changes on the relationship of the library to computer support activities? What will be the effect on the users' relationship to the library?

d. What costs are anticipated for the planned programs? How will they be funded?

STEP 6 General Remarks and Comments

D. Technical Interview Record

This Record was prepared as a device for recording information elicited during interrogation of librarians by the interview team. It was not provided to the candidate interviewee prior to the discussions. Its Step and Paragraph numbers are keyed to corresponding sections in the Technical Interview Guide which was provided to the interviewee in advance of the meeting.

TRENDS IN LIBRARY AUTOMATION

Technical Interview Record

Department/Agency ____________________

Interviewee(s): Name ____________________

Title ____________________

Name ____________________

Title ____________________

IDC Interviewer(s) ____________________

____

____

Date of Interview ____________________

STEP 1 Internal Organization & Budget

1a. Obtain internal library organization chart. ADD MANNING DATA. (Develop sketches as required.)

(1) Has it changed recently (3-5 years)? Yes ( ) No ( )

How

Why

(2) Are there any remote (decentralized) branches? Yes ( ) No ( )

- Where are they located organizationally?
- Where are they located geographically?

1b.

		Responsibility	Automated (Yes/No)
A.0	ACQUISITION		
A.1	Select books, periodicals, other materials		
A.2	Obtain approval of expenditure; need-to know		
A.3	Order books, periodicals, other publications		
A.4	Check in books and periodicals; match and inspect shipment		
A.5	Receive reports		
A.6	Order and check in microforms		
A.7	Others		
S.0	STORAGE; CATALOG & CLASSIFICATION		
S.1	Assign classification numbers		
S.2	Assign control or accession numbers		
S.3	Prepare main entry/subject catalog cards		
S.4	Order printed catalog cards for books		
S.5	Maintain catalog authorities		
S.6	Assign subject heading terms (books/reports)		
S.7	Perform subject indexing for periodical articles		
S.8	Prepare abstracts or analytical notes		

		Responsibility	Automated (Yes/No)
STORAGE; CATALOG & CLASSIFICATION(cont'd)			
S. 9	Filing of entries		
S. 10	Others		
R. 0	REFERENCE & RETRIEVAL		
R. 1	Answer "ready" reference questions		
R. 2	Prepare bibliographies		
R. 3	Maintain specific area reference files		
R. 4	Maintain user interest profiles		
R. 5	Perform literature searches		
R. 6	Translate technical articles		
R. 7	Others		
C. 0	CIRCULATION		
C. 1	Route new issues of periodicals		
C. 2	File/circulate books, periodicals, reports		
C. 3	Circulate classified reports		
C. 4	Perform interlibrary loan transactions		
C. 5	Maintain borrower's file		
C. 6	Prepare/distribute list of acquisitions		
C. 7	Duplicate/circulate Table of Contents for periodicals		
C. 8	Reproduce hard copies from microform		
C. 9	Others		
I. 0	INVENTORY OF COLLECTION		
I. 1	Control of classified reports, receiving, down grading, destruction, inventory		
I. 2	Inventory of periodical/book collection		
I. 3	Statistical Accounting		
I. 4	Others		

1c. Characterize the staff (down to branch chief or lower, as required) generally in terms of:

Title	Education	ADP Training or Experience	Experience (years & type)

1d. Funding

(1) Identify funding process for library activities. (Overhead Accounts, Working Capital Funds, Line item, etc.)

(2) Is the budget adequate for overall operation, including automated activities?

(3) Is budget control the responsibility of the librarian?

STEP 2 Relationships of Library with Management, ADP Staff, Users

2a. Management Relationship

(1) Locate library within parent organization (see 6a). Any changes in the last 10 years? Why?

(2) Is present location a problem?

(3) Characterize present roles of management with respect to library operations. (Generous support, aggressive, tolerant, hostile, etc.)

2b. EDP Staff

	Total Staff	Systems Analysts	Programmers	Others
(1) Organizational Location				
(2) Staff Size				
(3) Staff Functions				

2c. Characterize Relationships Between Library and:

	(a) Management Analysts	(b) Computer Analysts	(c) ADP Operators
(1) During Development			

	(a) Management Analysts	(b) Computer Analysts	(c) ADP Operators
(2) During Operations			

2d. Has the library-parent relationship changed due to new procedures or automated systems? (e.g., Tighter control of budget by parent. More parental interest in library.).

2e. Relationship with other libraries and information activities (both Federal and non-Federal) as regards such entrprises as: ILL, union lists, etc.?

2f. (1) In general what type of users do you have?

		SERVICES PROVIDED									
Type	Approx. % (or nos.)	SDI	Accession Lists	Per. Routing	Bibs	Specific Items	Title Listings	Abstracts	Translations	Ready Ref.	Dupli. Serv.
Administrative											
Management											
Engineers and Scientists											
Social Scientists											
Lawyers											
Military Officers											
Technicians											
General Public											

DEMAND	Telephone	Memo	Library Request Form	Personal Visit	In Person	
					Self Service	Ask Librarian
Specific Items						
Title Listings						
Abstracts						
Translations						
Ready Reference						
Request for Duplicates						
Other						

2f. (2) How do the users satisfy their demands? i.e., How do they place requests for different services with the library?

2f. (3) How large is total population of regular, active users? Potential Users? Expected Growth?

2f. (4) How have users reacted to both routine and on-demand services?
(Based on user responses; user statistics, if any)

2f. (5) Identify problem areas in dealing with user requirements (e.g., response time, communications, and format needs).

STEP 3 Present Operations and Collection

3a. Operations

(1) What equipment is used in performing those functions which have been automated?

FUNCTION	EQUIPMENT

(2) What are major inputs and outputs of these functions?

FUNCTION	INPUTS	OUTPUTS

(3) Who owns the equipment? (Library, GSA, contractor, etc.) Time allocated for library? Location?

(4) Could your present software be made available to other libraries? What programming languages are used?

(5) What problems now exist in the library due to automation?

(6) How have users reacted to your automation program?

(7) How has automation benefited the users?

(8) How has automation benefited the library?

Type of Data / Type of Item	b. (1) Collection Size	Annual Acquisition Rate	b. (2) Annual Usage Rate Reference (In Library)	Circulation
Books				
Monographs				
Total Non-Books				
Periodicals				
Unclassified Tech. Reports				
Classified Tech. Reports				
Brochures				
Catalogs				
Directives				
Drawings, Schematics				
Intelligence Docs.				
Manuals				
Maps				
Microform				
Personal Notes				
Photographs				
Standards & Codes				
System Specs				

b. (3) Can you estimate how your collection is distributed by subject?

SUBJECT	Approx. % (Numbers if available)

STEP 4 Past Operational Problems and the Planning Process

4a. (1) Identify and rank past problem areas (include effects on library functions) and identify if beyond the library's control.

- Staff Limitations
- Procedures
- Scheduling
- Support
- Material & Labor costs
- Quality of service
- Added service requirements
- Budget constraints

(2) Did these problems lead to a comprehensive analysis of the library and its role in the agency?

(a) If yes, who was involved (management, library staff, contractor), and did a system development plan result?

(b) If no, where did the initiative for the automation program begin? (library staff, library director, agency management, outside pressure?)

4b. (1) What were the system development objectives? Who formulated them? Did the resultant system satisfy all objectives?

(2) What measures are used to estimate the success, value, or improvements resulting from new systems or procedures introduced?; these in relation to resource utilization, performance or quality of service.

(3) Design

- How was system design accomplished (contract support, library staff, computer staff)?
- Were costs shared during design and development? How?

- Are expenses for operation shared by other organizations?

(4) Adapted Programs

- Have existing systems or programs been adopted for use by the library?
- What were the problems of adapting these to your use?

(5) Compatibility

- Was consideration given to interfacing with information systems existing elsewhere in the Federal library community?
- Via common unit record format (e.g., MARC)?
- Via common vocabulary?
- Via equipment compatibility?
- Via common data base?

(6) Sequence of Automation

- In what order were the library functions automated?
- Why was this order chosen?

(7) Problems encountered during automation

- Incompatible software/hardware ... complete redesign?
- Budget overruns?
- Schedule overruns?
- Hostile library staff?
- etc.

STEP 5 Future Plans

5a. Plan Modfications

(1) Describe any changes in the automation program which are planned. Include any new planned or proposed systems in sequence in which they will be automated.

(2) Where did the initiative for these changes originate - with the library staff, management, computer personnel or the users?

5b. Will any of these changes affect the internal organization of the information activity? (For example, in numbers and types of staff.)

5c. What will be effect of these changes on the relationship of the library to computer support activities? What will be the effect on the users' relationship to the library?

5d. What costs are anticipated for the planned programs. How will they be funded?

STEP 6 General Remarks and Comments

6a. How do you feel about library automation?

6b. About MARC? Is your library contemplating early implementation of the Federal Library Committee's recommendation that MARC II be accepted as the basis for communicating bibliographic information? About its probable adoption as a Federal Standard?

6c. About use of real-time systems in libraries?

APPENDIX B

DATA SUMMARIES

Appendix B - Data Summaries

I. Introduction

This Appendix contains all raw data gathered in the course of the study. It deals with 28 libraries, but contains administrative data gathered through interviews at administrative levels in the parent organizations. The following listing provides an overview of the content, and also serves as Table of Contents for the Appendix. The Data Summary numbers correspond to the same libraries in the same way as in all data tables found in Section IV of the report.

No.	Agency/Library	Case Report Reference	pp.
1	USDI/HQ	1 App A	3
2	USGS/HQ	1 App C	13
3	USBM/CPRC	1 App B	22
4	DOT-FAA/HQ	2 App A	31
5	DOT-BPR/HQ	2 App B	43
6	USA-MERDC	8 App A	52
7	USA-Ft. Detrick	8 App D	61
8	USA-HDL	8 App B	70
9	USA-Edgewood Arsenal	8 App C	79
10	USN-NRL	9 App C	88
11	USN-NWL	9 App A	97
12	USN-NOL	9 App B	106
13	USDC-NBS	5	115
14	USDC-ESSA/ASL	4	124
15	USDC-ESSA/GSL	4	133

No.	Agency/Library	Case Report Reference	pp.
16	USDC-ESSA/BLL	4	141
17	HEW-NIH/HQ	12	151
18	HEW-FDA/HQ	12 App A	160
19	HEW-NIMH/NCMHI	12 App B	169
20	USDA-NAL	13 App A	178
21	USDA-NAL/PIC	13 App B	187
22	USDT-IRS/HQ	11	196
23	USDT-IRS/RIRA	11 App A	205
24	HUD/HQ	16	214
25	AEC/HQ	15	223
26	NASA-STID/STIF	14 App B	232
27	NASA-GSFC	14 App A	241
28	FCC/HQ	3	250

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: USDI HQ Library

Parents: Assistant Secretary for Administration/USDI

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency			USDI	Explicit Info. Mission	
Level					
Primary			EI	Yes	No
Sec.			REG		X

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small		X	Yes	No
Large			X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X			X
(b) ADP				

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)			X	
(b)		X		

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?	X	

8. (a) Total size (employees) of Agency 60, 900

(b) Agency Budget (Thousands of Dollars) $474, 573

9. Library Budget

(a) Personnel ______

(b) Equipment ______

(c) Materials ______

(d) Total $1, 058, 000

10. Computer In-Library : Yes ____ No X Cost: ______

In-Agency : Yes X No ____ ______

Contract Svc : Yes ____ No X ______

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?	X	
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								?
Filled								
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Director			MSLS					X	X	>15
Assistant Director			BS					X	X	8
ADP Br. Chief (Vacant)			BS					X	X	- -
Info Servc Div Chief			MSLS		X					13
Reference Librarians			MSLS	several in bio-sciences					X	1-3
Bibliographic Br. Chief			MSLS			X	X			3
Expediting Servs Div Chief			MSLS							20
Processing Br. Chief			MSLS					X	X	5
Circulation Br. Chief			HS			X				10
Indexing Br. Chief			HS		X					18
Accessions Svcs Div Chief			MSLS	bio			X	X		15
Selection Br. Chief			MSLS		X					25
Acquisition Br. Chief			HS			X				25
Cataloging Br. Chief			MSLS			X				25

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	436,000	4,800	Conservation	
Bound Periodicals (Vols)	285,000	3,200	Research in and Development of Natural Resources (domestic & foreign) including: Minerals Water Fish Wildlife	
USDI Publications	10,000	2,000	Public Lands	
TOTAL	731,000	10,000	American Art and History	
Serial Subscriptions	7,500	100	Parks (national, state, local, & foreign)	
Newspapers	30	2	Outdoor Recreation	
			American Indians History Legal Aid Social & Economic Development	
			U.S. Territories	
			Hydroelectric Power	
			Irrigation	
			Law & Legislation	

2. Age of Library 119 years*

3. (a) Size of Agency 60,900
(b) Total potential User population 43,000
(c) Total active Users ______

4. Users by professional category

(1) Administrative and Management	20%
(2) Scientists and Engineers	35
(3) Technicians	3
(4) Lawyers	20
(5) Government (Non-Agency)	
(6) General Public	7
(7)	
(8)	
(9)	
(10)	

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	10,200	ILL-loaned	?
Searches	?	-borrowed	?
Bib. Searches	?	Journals Routed	?
Referrals		Book Circ.	?
		Total Circ.	24,685

(c) SDI: Not Offered Formally
(1) Group Profiles (number) NA
(2) Individual Profiles (number) NA

*A USDI HQ "circulating library" operated from 1850 to 1907, when it was abolished. Its books were transferred to LC. In 1949 the HQ Library was recreated by consolidating eight bureau libraries. Collections of these bureau libraries (amounting to nearly 700,000 volumes at the time of consolidation) dated from approximately 1850.

6. Services of the Library

PRESENT	PLANNED
Accessions List (books) "List of Catalog Serials Currently Received" Periodical Routing Literature Searches Bibliography Compilation "Staff Papers" - special literature surveys Loan(Circ) of Specific Items "Table of Contents" Service in mgmt, water resources & law Translation search & purchase, and in-house translation Ready Reference Duplication Service Office copy book procurement Title Listings Informal SDI Maintain Specific Area Reference File	[1] SDI on a formal basis

7. Special Problems of the Library

(1) Time lags in meeting field requests and in returning materials to the shelf after loan to the field. Reason: staff inadequacies.

(2) Some inefficiencies in present workflow and EDP operations, e.g., multiplicity of records and some minor format.

(3) Main reason for present automation - large acquisitions backlog for limited staff.

Ranking of past problems of the library:

(1) Lack of funds - severity of problem reduced by recent conversion to line item from working capital funding.

(2) Lack of staff.

(3) Lack of clear definition of the role of the library.

(4) Recruiting competent people.

(5) Problems of excessive workload and technical accuracy and precision. Automation of the high-backlog acquisitions operations solved much of this problem.

(6) Complex billing procedures when operating under a revolving fund.

8. Present and Planned Automated Functions

FUNCTION	PRESENT*	PLANNED
(a) Selections and Acquisition (order, claim, records)	P/O's for books & periodicals(3) Monthly lists of items ordered(3) Fiscal Accounting Cards (2) Receiving Card files in Acq - Discarded upon receipt (2) Quarterly list of all items received and on-order (3)	[1] [3]
(b) Input Processing Physical Process. Descr. & Subj. Tagging	3x5 Shelf List Card on Diebold Power File (1)	[4]
(c) Reference Search, Referral, SDI, Retrieval		[2]
(d) Publication and Printing	Accessions lists for books and periodicals (4)	[1]
(e) Circulation	Charge out and past due notice cards - borrower's name, office, title, due date (5)	[3]

9. Future Plans

[1] Streamlining present system and conversion to 360/65.

[2] Computer search capability planned with SDI.

[3] Inventory control records are to be made more extensive and timely.

[4] MARC tapes for misc printouts (Very Indefinite Plan).

---

*The library uses an IBM 360/20 system and supporting EAM equipment in the Office of Management Operations.

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro			(2) (2)	(3)[1][3] (3)[1][3]	
2. Input Process.	Books Journals Documents Micro		(1) (1) (1)		[4]	
3 Reference	Books Journals Documents Micro				[2] [2] [2]	
4 Print & Publish	Books Journals Documents Micro				(4) [1] (4) [1]	
5 Circ.	Books Journals Documents Micro				(5)[1][3] (5)[1][3] (5)[1][3]	

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: USGS HQ Library

Parents: Office of Technical Reports/Geologic Div/USGS/Ass't Sec., Mineral Resources/USDI

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		USGS	USDI	**Explicit Info. Mission**	
Level					
Primary		RD	EI	**Yes**	**No**
Sec.		EI	REG	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large			X	

3. **Organizational Location:**

(a) Library
(b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library		X	X	
(b) ADP				X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moder-ate	Small	None
(a)			X	
(b)		X		

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	
(b) Agency represented on Government-wide planning body?	X	

7. Library Budget is Line-Item in:	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency	8,412
(b) Agency Budget (Thousands of Dollars)	$97,228

9. Library Budget	
(a) Personnel	$467,943
(b) Equipment }	101,966
(c) Materials }	
(d) Total	$569,909

	Yes	No	Cost:
10. Computer In-Library:		X	
In-Agency:	X		
Contract Svc:			

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?		X
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled				33			34	67*
Vacancies								

* 37 of these are in the USGS HQ Library in Washington; others are in the three field library branches.

17. Library Staff Training and Experience (Selected Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
USGS HQ										
Head Librarian			BLS				X			33
Asst Librarian			MSLS (cand)						X	12
Chief, Catalog and Class.			BLS		X					28
Ref Librarian and Map Curator			MSLS	X		X				26
Chief, Circulation			AB		X					27
Chief, Acquisitions			MSLS		X					10
Denver Branch										
Head Librarian			MSLS		X					18
Menlo Park Branch										
Head Librarian			MSLS			X				>10
Flagstaff Branch										
Head Librarian			MSLS			X				1

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%*
Bound Volumes - Includes books & periodicals	420,000	10,000	Geology Geophysics Geochemistry Paleontology	25 -J; 67 -B
Pamphlets/Reprints	120,000	very small	Paleobotany Ecology Biochemistry	
Serials	5,000	100	Economic Geology Geomorphology	
Maps	150,000	?	Seismology Volcanology	
Photographs (in the Denver collection)	150,000	20,000	Mineralogy Petrology Crystallography Geochronology Oceanography Hydrology and Hydraulics Water Resources Limnology Cartography Geodesy Geography	
			Engineering Materials Chemistry Botany Zoology Other Peripheral Areas	75 -J; 33 -B

* J = Journals
B = Books .

2. Age of Library 90 yrs

3. (a) Size of Agency 8,412
(b) Total potential User population
(c) Total active Users > 2,000

4. Users by professional category

(1) Administrative and Management	10%
(2) Scientists and Engineers	80
(3) Technicians	5
(4) Lawyers	5
(5) Government (Non-Agency)	—
(6) General Public	small
(7)	
(8)	
(9)	
(10)	

5. Output Traffic

(a) Reference		(b) Circulation		
Ready Ref.		ILL-loaned	?	75% of total ILL
Searches		-borrowed	?	25% of total ILL
Bib. Searches		Journals Routed	55,000	
Referrals		Book Circ.	50,000	
		Total Circ.	> 105,000	

(c) SDI:
(1) Group Profiles (number)
(2) Individual Profiles (number)

6. Services of the Library

PRESENT	PLANNED
Periodical Routing Loan (Circulation) of Specific Items Literature Search (Manual) Bibliography Preparation - Demand - Library contributions to the "Bibliography of North American Geology"(OTR Pub) Translation Procurement Ready reference	

7. Special Problems of the Library

(1) Space - a new building will ease some of this.

(2) Staff limitations

a. Staff size is fixed

b. Shortage of qualified candidates

(3) Weeding of old material is difficult in geology, since it is used nearly as often as newer items

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	No Automation	[2]
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing		
(e) Circulation		[1]

9. Future Plans

[1] Circulation control via EAM equipment

[2] Acquisitions (purchasing, record-keeping) via EAM or digital computer (if available)

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books			[2]*	[2]*	
	Journals			[2]	[2]	
	Documents			[2]	[2]	
	Micro					
2. Input Process.	Books					
	Journals					
	Documents					
	Micro					
3 Reference	Books					
	Journals					
	Documents					
	Micro					
4 Print & Publish	Books					
	Journals					
	Documents					
	Micro					
5 Circ.	Books			[1]		
	Journals			[1]		
	Documents			[1]		
	Micro					

( ) Past [ ] Future

* EAM or DC decision is still pending; main contingency is equipment availability.

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: US Bu Mines - College Park Research Center Library

Parents: Admin Office/CP Research Center/Office of Metallurgy Research/Office of Mineral Research/USBM/Ass't Sec. Mineral Resources/USDI

1. **Mission**

   (a) Classification

   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency	CPRC	USBM	USDI	**Explicit Info. Mission**	
Level					
Primary	RD	EI	EI	**Yes**	**No**
Sec.	RD	REG	REG		X

2. **Operational Subordinate Elements:**

   (a) Size; (b) Relative number;

   (c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small	X		**Yes**	**No**
Large				X

3. **Organizational Location:**

   (a) Library

   (b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X		X	
(b) ADP		X		X

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?		X
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?		X

	Yes	No
(b) Agency represented on Government-wide planning body?		X

7. Library Budget is Line-Item in:	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency	130
(b) Agency Budget (Thousands of Dollars)	$ 1,750

9. Library Budget	
(a) Personnel	$18,400
(b) Equipment	
(c) Materials (includes books, printing, repro.)	$ 6,100
(d) Total	$24,500

10. Computer In-Library :	Yes ____	No X	Cost: NA
In-Agency :	Yes X	No ____	____
Contract Svc :	Yes X	No ____	____

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	1					1		2
Filled	1					1		2
Vacancies	0					0		0

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Librarian	1410		BSLS		X					20
Library Assistant	-		HS		X					2 (USBM)

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	8,502	300	Chemistry	
Periodicals, Bound Vols	4,548	200	Geology	
			Mineral Industries	
Unclassified Tech Reports	500	50	Ceramics	
Maps	100	0	Chemical Engineering	
Patents	300	40	Mining Engineering	
			Metallurgy	
			X-Ray Spectroscopy	

2. Age of Library 26 yrs

3. (a) Size of Agency 130
(b) Total potential User population 114
(c) Total active Users 104

4. Users by professional category
(1) Administrative and Management }
(2) Scientists and Engineers } 75%
(3) Technicians 25
(4) Lawyers ____
(5) Government (Non-Agency) ____
(6) General Public ____
(7) ____
(8) ____
(9) ____
(10) ____

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	920	ILL-loaned	53
Searches		-borrowed	1,015
Bib. Searches	3-4	Journals Routed	6,347
Referrals		Book Circ.	1,719
		Total Circ.	9,134

(c) SDI:
(1) Group Profiles (number) NA
(2) Individual Profiles (number) NA

6. Services of the Library

PRESENT	PLANNED
Accessions List Periodical Routing Bibliography Preparation Loan (Circulation) of Specific Items Ready Reference Duplication Service (mostly self-service)	No planned expansion.

7. Special Problems of the Library

(1) Lack of space

(2) Lack of staff - ILL creates an excessive workload

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	No Automation	
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing		
(e) Circulation		

9. Future Plans

No automation plans

10. **Sequence of Automation Steps:** No Automation

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: FAA HQ Library

Parents: HQ Opns; Assoc. Adm for Administration; FAA; DOT

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		DOT	FAA	**Explicit Info. Mission**	
Level					
Primary		REG	REG	**Yes**	**No**
Sec.		EI	EI		X

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large			X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X			X
(b) ADP	X			X

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	

	Yes	No
(b) Agency represented on Government-wide planning body?	X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8.	(a) Total size (employees) of Agency	53,153
	(b) Agency Budget (Thousands of Dollars)	$1,271,500

9. Library Budget

(a) Personnel	$ 283,000
(b) Equipment	
(c) Materials	85,000
(d) Total (Inadequate)	$ 368,000

10. Computer In-Library: Yes ______ No X Cost: ______

In-Agency : Yes X No ______ ______

Contract Svc: Yes X No ______ ______

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	11	1	0	12	11	7	18	30
Filled	10	0	0	10	11	7	18	28
Vacancies	1	1	0	2	0	0	0	2

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Office of Chief Chief, Lib. Svc. Div	1410		MSLS			X				25
Info Anal & Proc Br										
Chief IA&P Br	1410		MSLS				X			16
Libn. (Acq)	1410		MSLS				X			24
Libn(Cat & Class)	1410		BA		X					25
Tech Info Spec	1412	----------	----(Vacant)	----	----	----	----	----	----	----
Ref & Res Br										
Chief, R&R Br	1410		MSLS	Yes				X	X	19
Libn (Ref)	1410		MSLS					X	X	21
Libn (Ref)	1410		MSLS				X			9
Libn (Ref)	1410		MSLS			X				8
Libn (Ref)	1410		MSLS			X				6
Libn (Ref/Medical)	1410		MSLS			X				6
Law Library Br Chief	1410	----------	----(Vacant)	----	----	----	----	----	----	----

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	55,000	2,000 vol	Subject areas: Aeronautics	
Bnd Journals (Vols)	10,740		Airplanes	
Periodical Subs	808	40	Airports	
Unclassified Tech Reports	27,000	3,000	Civil Aviation	
Classified Tech Repts	900		Communication	
Microfilm Reels	1,650		Electronics	
Microfiche	40,000			
Congressional Docs	15,000		Transportation	
AF Regulations, Manuals & TO's	15,000		Economics	
DOD nomenclature cards	300,000		Aviation Medicine	
FAA instruction books	4,000		Management	
FAA Academy course manuals	500		Law	
Aircraft maintenance & flight manuals	200		Legislative Docs. Specs & Standards	
Technical Standard Orders (TSO)	125		Military Manuals	
Telephone directories	140		Technical Orders and Regulations	
DOD Directives	2 linear ft			
Military & Federal specs, standards & handbooks	36 linear ft.		See pp A-38 ff in R-8709 (CR-2)-A, U.S. Dept. of Transportation, for detailed subject analysis.	
Aeronautical Info Publications(AIP's)	145			
Conventional Abstracts & Indexes	41			
Government Report Abstracts and Indexes	5			

2. Age of Library 41 yrs

3.

(a) Size of Agency	53,153
(b) Total potential User population	4,000
(c) Total active Users	2,000

4. Users by professional category

(1) Administrative and Management	25%
(2) Scientists and Engineers	35
(3) Technicians	7
(4) Lawyers	5
(5) Government (Non-Agency)	-
(6) General Public	-
(7) Social Scientists	7
(8) Military (USCG etc.)	1
(9) All non-DOT (Gen Public)	20
(10)	

5. Output Traffic

(a) Reference	FY 68	**(b) Circulation** *	
Ready Ref.	28,456	**ILL-loaned**	13,500
Searches	1,124	**-borrowed**	
Bib. Searches		**Journals Routed**	
Referrals		**Book Circ.**	
		Total Circ.	(Not available)

(c) SDI:

(1) Group Profiles (number)

(2) Individual Profiles (number)

*Survey of DOT Circulation showed 75% of borrowers were FAA; 5% FHWA; and 20% other DOT.

6. Services of the Library

PRESENT	PLANNED
Informal SDI Accessions list - "Availability of Selected Tech. Rpts" (FAA Report lit. only) Periodical routing Bib preparation (manual) Loan (Specific Items) Translation service (referral and purchased) Ready reference Photo-duplication Personal and special collections acquisitions service Publ. Corporate Author Index to FAA Reports	(1) Report retrieval capability (beyond FAIRS) (2) SDI

7. Special Problems of the Library

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(I) microfilm of reports (1a) Termatrex Deck; (1b) Cut Flexo tape	
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(2) Flexo Tape to Mag Tape conversion (3) Author catalog (comp. prep.) (5) Union list (comp. prep.)	
(c) Reference Search, Referral, SDI, Retrieval	(1c) Termatrex retrieval (FAIRS) (II) Lodestar retrieval of microfilm.	
(d) Publication and Printing	(4) accessions list (ASTR); weekly kp, prep 80/80 listing (1401), photo reproduced.	
(e) Circulation		

9. Future Plans

[1] Linotron-produced FAA thesaurus

[2] Corporate author index to all TR's

[3] Journal article index

[4] On demand computerized search

[5] Computerized SDI

[6] Computer produced book catalogs

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro		(1a, 3)	(1b)	[6] [3] (2, 5)[1, 2, 6]	
3 Reference	Books Journals Documents Micro		(1c)		[4, 5]	
4 Print & Publish	Books Journals Documents Micro				(4) [1]	
5 Circ.	Books Journals Documents Micro					

(   ) Past   [   ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: DOT Libraries

Parents: DOT

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency			DOT	**Explicit Info. Mission**	
Level					
Primary			REG	**Yes**	**No**
Sec.			EI		X

2. Operational Subordinate Elements:

(a) Size; (b) Relative number; (c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small			**Yes**	**No**
Large	X		X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X			X
(b) ADP	X			X

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	NA	NA
(b) The budget of the Agency?	NA	NA

8. (a) Total size (employees) of Agency 65,400

(b) Agency Budget (Thousands of Dollars) $ 7,902,629

9. Library Budget

(a) Personnel NA

(b) Equipment ______

(c) Materials ______

(d) Total ______

10. Computer In-Library : Yes ______ No ______ Cost: ______

In-Agency : Yes ______ No ______ ______

Contract Svc : Yes ______ No ______ ______

	NA	Yes	No
11. Does Library Administrator have dual line/staff role?			
12. Is he under tight administrative control?			
13. Does Library have high intra-Agency coordination requirements?			
14. Does Library have in-house planning/ feasibility study capability?			
15. Does Library or direct parent have design and development capability?			

16. Library Staff Summary (Total DOT)

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	45	7		52	26		26	78
Filled								
Vacancies								

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: BPR HQ Library

Parents: Program Coordinator/Office of R&D/BPR/FHWA/DOT

1. Mission

(a) Classification

(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		BPR	DOT	**Explicit Info. Mission**	
Level					
Primary		REG	REG	**Yes**	**No**
Sec.		EI	EI		X

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large			X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library		X	X	
(b) ADP	X			X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?		X

	Yes	No
(b) Agency represented on Government-wide planning body?		X

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?		X
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency		5, 400
(b) Agency Budget (Thousands of Dollars)	FY '68	~4, 000, 000

9. Library Budget

(a) Personnel	$ 283, 000
(b) Equipment	105 ,000
(c) Materials	8, 000
(d) Total	$ 113 , 000

10. Computer In-Library : Yes _____ No X Cost: __________

In-Agency : Yes X No _____ __________

Contract Svc : Yes _____ No X __________

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?	X	
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?		X
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	13			13	3	3	6	19
Filled	9			9	2		2	11
Vacancies	4			4	1	3	4	8

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Librarian	1410	13								
Ref & Cir Sec										
Supervisor	1410	11								
Ref Lib	1410	9								
Ref Lib	1410	7								
Ref Lib	1410	5								
Lib Tech	1411	5								
Res & Bib Sec	1410	11								
Supervisor										
Ref Lib	1410	9								
Lib Tech	1411	4								
Tech Proc Sec										
Supervisor	1410	11								
Acq & Ser Unit										
Supervisor	1410	9								
Acq Lib	1410	7								
Lib Tech	1411	4								
Lib Asst	-	4								
Clerk/Typist	-	2								
Catalog Unit										
Supervisor	1410	9								
Cataloger	1411	7								
Cataloger	1411	5								
Lib Asst										

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	183, 700		Highway Technology	75
Bnd Vols of Journals	11, 600		- Highway & Bridge Engineering	
Pamphlets & Reports	94, 400		- Highway Econ & Finance	
Periodical Subs. Titles	682		- Highway Transp.	
			- Traffic Engrg.	
TOTAL	289, 700	10, 000	- Traffic Safety	
			- Roadside Develop.	
			- Transportation Planning	
			Geography	10
			Social Science	10
			- Urban Studies	
			History of Road Building	5

2. Age of Library 67 yrs

3. (a) Size of Agency 5,400
(b) Total potential User population 7,500
(c) Total active Users (est) 3,000

4. Users by professional category

(1) Administrative and Management	5%
(2) Scientists and Engineers	95
(3) Technicians	
(4) Lawyers	
(5) Government (Non-Agency)	
(6) General Public	
(7)	
(8)	
(9)	
(10)	

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	16,800	ILL-loaned	2,100
Searches	1,200	-borrowed	840
Bib. Searches		Journals Routed	18,000 issues
Referrals		Book Circ.	7,500
		Total Circ.	28,440

(c) SDI:
(1) Group Profiles (number)
(2) Individual Profiles (number)

6. Services of the Library

PRESENT	PLANNED
Accession Lists	
Periodical Routing	
Bibliography Preparation	
Circulation of Specific Items	
Ready Reference	
Duplication Service	
Annotation on Hy Wy Lit	

7. Special Problems of the Library

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)		
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing		
(e) Circulation	Computer-printed journal-routing slips [Never became operational]	

9. Future Plans

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro				 (1) (1)	

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Technical Information Division (MERDC)

Parents: Facilities & Services Office/MERDC/AMEC/AMC/USA/DOD

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency	MERDC/AMEC	AMC	USA	**Explicit Info. Mission**	
Level					
Primary	RD	RD	REG	**Yes**	**No**
Sec.	RD	SPT	E1	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small			**Yes**	**No**
Large	X			X

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X			X
(b) ADP	X			X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. **Subject Overlap:**

(a) **Between operational subordinate elements**

(b) **With bodies external to the Agency (Federal or non-Federal)**

	Large	Moderate	Small	None
(a)		X		
(b)		X		

6. **Information Planning:**

(a) **An Agency-wide planning body exists?**

Yes	No
X	

(b) **Agency represented on Government-wide planning body?**

Yes	No
	X

7. **Library Budget is Line-Item in:**

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) **Total size (employees) of Agency** 1,400

(b) **Agency Budget (Thousands of Dollars)** ______

9. **Library Budget**

(a) **Personnel** ______

(b) **Equipment** ______

(c) **Materials** ______

(d) **Total** - Includes labor, contracts and books $300,000

10. **Computer In-Library: Yes** ______ **No** X **Cost:** ______

In-Agency : Yes X **No** ______ ______

Contract Svc: Yes ______ **No** ______ ______

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	3	15		18	3	1	4	22
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief, TID	1412		MS	X			X	X		
Secretary			HS			X				
Chief, TDC	1410		MSLS							
Documentalists & Info. Specs. (14)	1412		BS	X		X	- or higher			
Chief, Tech Lib	1410		MSLS		X					
Ref. Lib	1410		MSLS		X					

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
TDC			Dominant Subjects	
Tech Reports	50,000	3,600	Electrical Engineering Physics	
Tech Lib			Mechanical (Vehicle) Engineering	
Books	15,000	3,800	Military Technology	
Bound Per Vols	2,000	480	Chemistry	
Unbound Per	25,000	6,250	Sanitary Science	
Army Pubs	25,000	6,250	Specific Subjects	
Commercial Catalogs	5,000	1,200	Blast Effects Boats	
Standards	3,000	720	Bridges	
Translations (Spec Coll.)	20,000	5,050	Camouflage Construction	
Per Subscriptions	750	50	Detection	
TOTAL	95,750	23,800	Electronics	
			Environmental Engineering	
			Explosives	
			Fuel Storage	
			Materials Handling	
			Night Vision	
			Packaging	
			Vehicles	

2. Age of Library ______27 yrs.______

3. (a) Size of Agency ______1,400______
   (b) Total potential User population ______
   (c) Total active Users ______2,500______

4. Users by professional category
   (1) Administrative and Management ______10______ %
   (2) Scientists and Engineers ______90______
   (3) Technicians ______
   (4) Lawyers ______
   (5) Government (Non-Agency) ______
   (6) General Public ______
   (7) ______
   (8) ______
   (9) ______
   (10) ______

5. Output Traffic

(a) Reference		(b) Circulation	
		Document Circ	21,600
Ready Ref.		ILL-loaned	
Searches		-borrowed	
Bib. Searches		Journals Routed	
Referrals		Book Circ.	10,200
		Total Circ.	31,800

(c) SDI:
   (1) Group Profiles (number) ______180______
   (2) Individual Profiles (number) ______

6. Services of the Library

PRESENT	PLANNED
Group & Individual SDI Accession Lists Bibliography Preparation State-of-the Art Literature Searches Loan (Circ) of Specific Items Abstracting Services Translation Services Ready Reference Services Duplicating Services Tech Pub Procurement Services Routing Documents Rejected by Input Screening to Potentially Interested Users	

7. Special Problems of the Library

Past problem: 1) Installing 870 system required much debugging.
2) Requester - Searcher communication gap

Present problems: None

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(3) "Center Profile" used to screen all TR's rec'd on std dist for selection or rejection. EAM	
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(1) EAM printing of catalog cards	
(c) Reference Search, Referral, SDI, Retrieval	(5) SD1 (group & individual)	
(d) Publication and Printing	(2) EAM printing of accessions lists	
(e) Circulation	(4) EAM card control by due-date	

9. Future Plans

[1] Renting/buying digital computer or using a small computer already on base.

[2] Increase in number of literature files & type of material included.

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro			(3)		
2. Input Process.	Books Journals Documents Micro			(1)		
3 Reference	Books Journals Documents Micro			(5)		
4 Print & Publish	Books Journals Documents Micro			(2)		
5 Circ.	Books Journals Documents Micro			(4)		

( ) Past   [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Technical Library Branch -- Ft. Detrick

Parents: TID/Aerobiology & Evaluation Labs/Ft. Detrick/USA

1. Mission

(a) Classification

(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		A&EL	BRDL	Explicit Info. Mission	
Level					
Primary		RD	REG	Yes	No
Sec.		RD	EI	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small			Yes	No
Large	X			X

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library		X		X
(b) ADP		X		X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 2, 500

(b) Agency Budget (Thousands of Dollars)(TID only) $690, 326

9. Library Budget

(a) Personnel ______

(b) Equipment ______

(c) Materials ______

(d) Total FY 69 $236, 108

10. Computer In-Library : Yes ____ No X Cost: ______

In-Agency : Yes X No ____ ______

Contract Svc : Yes ____ No ____ ______

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	12	2		14	1		1	15
Filled	10	2		12	1		1	13
Vacancies	2			2				2

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief, TID (Acting Chf, Lib Br)			HS plus bio course					X	X	>8
Chief, Library Br (Vacant)	Scientist with managerial exp & ADP experience preferred									
Librarian			MSLS			X				
Librarian			BSLS			X				
Librarian (Vacant)			(MSLS and periodicals control exp preferred)							

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	50,000	875	Dominant Subjects*	
Bound Per Vols	25,000	350	Biological & Medical Sciences	61 B&P
Documents (Classif & Unclassif)	47,000	4,000	Agriculture Chemistry Military Science Atmospheric Science	
Per Subscriptions	1,100	15		

* These subjects account for 61% of the books and periodicals and for 75% of the documents in the collection.

2. Age of Library 26 yrs.

3. (a) Size of Agency 2, 500

(b) Total potential User population ____

(c) Total active Users 200-300

4. Users by professional category

(1) Administrative and Management 77 %

(2) Scientists and Engineers 20

(3) Technicians ____

(4) Lawyers 1

(5) Government (Non-Agency) ____

(6) General Public ____

(7) Military Officers 2

(8) ____

(9) ____

(10) ____

5. Output Traffic

(a) Reference		**(b) Circulation** Doc Circ	9, 400
Ready Ref.		**ILL-loaned**	
Searches		**-borrowed**	
Bib. Searches		**Journals Routed**	
Referrals		**Book Circ.**	10, 000
		Total Circ.	19, 400

(c) SDI:

(1) Group Profiles (number) NA

(2) Individual Profiles (number) ?

6. Services of the Library

PRESENT	PLANNED
Individual SDI	Project SDI (of 1498 file)
Accession Lists	User access to a book-form catalog
Bibliography Preparation	
Loan (Circ) of Specific Items	
Locally Prepared Abstract Bulletin	
Demand Translation Service	
Photoduplication Service	
Periodical Routing	

7. Special Problems of the Library

None

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(2) Journal expiration/1st copy/ supplier lists (4) Book ordering via std P/O	[2]
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(1) Journal holdings lists (1a) Flexowriter production of catalog cards (2a) Journal binding lists	[2]
(c) Reference Search, Referral, SDI, Retrieval	(6) Individual SDI (5) Retrospective & current awareness search	[1, 2]
(d) Publication and Printing	(4) Accessions Lists	
(e) Circulation	(3) Journal routing lists	

9. Future Plans

[1] Use of 1498 Form file for project-status SDI

[2] Introduction of an on-line capability

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro				(4) (2)	[2]
2. Input Process.	Books Journals Documents Micro		(1a)		(1, 2a)	[2]
3 Reference	Books Journals Documents Micro				(5, 6) (5, 6)	[2] [1, 2]
4 Print & Publish	Books Journals Documents Micro				(4) (4)	
5 Circ.	Books Journals Documents Micro				(3)	

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: :HDL Collections Branch (Library)

Parents: Scientific & Technical Information Office/Assoc. Director, Admin/HDL/AMC

1. Mission
   (a) Classification
   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency	HDL	AMC	USA	Explicit Info. Mission	
Level					
Primary	RD	RD	REG	Yes	No
Sec.	RD	SPT	RD	X	

2. Operational Subordinate Elements:
   (a) Size; (b) Relative number;
   (c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small			Yes	No
Large	X			X

3. Organizational Location:
   (a) Library
   (b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X			X
(b) ADP		X		X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)		X		

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
	X

7. Library Budget is Line-Item in:

(a) The budget of immediate parent?

(b) The budget of the Agency?

	Yes	No
(a)	X	
(b)		X

8. (a) Total size (employees) of Agency 1, 400 (est)

(b) Agency Budget (Thousands of Dollars) ----

9. Library Budget

(a) Personnel ----

(b) Equipment ----

(c) Materials ----

(d) Total ----

10. Computer In-Library : Yes _____ No X Cost: _____

In-Agency : Yes X No _____ _____

Contract Svc : Yes _____ No _____ _____

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	3			3			6	9
Filled	1			1			6	7
Vacancies	2			2				2

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief, STIO			PhD					X	X	>25
Chief, Res. Opns Br.			PhD	X				X	X	
O.R. Ass't (PT)			PhD	X				X	X	
Chief, Collections Br. (Librarian)	1410		MSLS		X					18
Chief Cataloger			HS		X					20

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books Library	13, 400	1, 400	Dominant Subject	
Books Satellite Labs	11, 600	600	Electrical/Electronic Engineering	
Books TOTAL	25, 000	2, 000		
Bnd Vols Per	9, 000	1, 070		
Tech Reports (Uncl, HC)	61, 000	5, 500		
Tech Reports (Class, HC)	77, 600	7, 000	Other Subjects	
TOTAL Tech Reports	138, 600	12, 500	Physics Mathematics Mech. Engrg. Chemistry	
Periodical Subs (Title)	734	20		

2. Age of Library >16

3. (a) Size of Agency 1,400 (est)

(b) Total potential User population 1,300

(c) Total active Users 1,100(est)

4. Users by professional category

(1) Administrative and Management 10 %

(2) Scientists and Engineers 90

(3) Technicians ____

(4) Lawyers ____

(5) Government (Non-Agency) ____

(6) General Public ____

(7) ____

(8) ____

(9) ____

(10) ____

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.		ILL-loaned	
Searches		-borrowed	
Bib. Searches		Journals Routed	
Referrals		Book Circ.	
		Total Circ.	

(c) SDI:

(1) Group Profiles (number) ____

(2) Individual Profiles (number) ____

6. Services of the Library

PRESENT	PLANNED
Ready Reference	Computer Search Capability
Loan (Circ) of Specific items	
Accessions Lists	
Informal SDI	
Bibliography Preparation	
Literature Search	
Abstract Service	
Translation Purchase	
Special Indexes (ABC) to Tech Reports	

7. Special Problems of the Library

(1) Staff restrictions (slots, vacancies & allowable levels)
(2) Low computer time priority for library usage
(3) Space
(4) Past problem of cataloging backlog has been solved by contract

8. Present and Planned Automated Functions

FUNCTION		PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(9a)	EAM cards are prepared for serials control	
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(4) (7)	1410 computer production of catalog cards Computer 7040/42 update of ABC Dictionary	[2, 3]
(c) Reference Search, Referral, SDI, Retrieval	(8)	Modified SDI via manual matching of computer-produced profile indexes	[1, 2]
(d) Publication and Printing	(5)	Computer 1410 produced accession lists with accompanying 7094 KWIC indexes	[2]
(e) Circulation	(9b)	EAM cards for circulation control (serials)	

9. Future Plans

8a. Past Automation
- (1) EAM equipment used for catalog card production (docs)
- (2) EAM equipment used for accession list production
- (3) EAM equipment used for circulation control
- (4) Computer search of document file via clue words and categories

9. Future Plans
- [1] Computer search capability for documents
- [2] Inclusion of journal literature in present systems
- [3] Automatic indexing and thesaurus update

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro			(9a)		
2. Input Process.	Books Journals Documents Micro			(1)	[2, 3] (4, 7)[3]	
3 Reference	Books Journals Documents Micro				[2] (6, 8)[1]	
4 Print & Publish	Books Journals Documents Micro			(2)	[2] (5)	
5 Circ.	Books Journals Documents Micro			(9b) (3)		

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Library Branch (Edgewood Arsenal)

Parents: Tech Info Div/Tech Support Directorate/CRDL/USA

1. Mission
   (a) Classification
   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		CRDL	USA	Explicit Info. Mission	
Level					
Primary		RD	REG	Yes	No
Sec.		RD	EI	X	

2. Operational Subordinate Elements:
   (a) Size; (b) Relative number;
   (c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small			Yes	No
Large	X			X

3. Organizational Location:
   (a) Library
   (b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X			X
(b) ADP		X	X	

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	
(b) Agency represented on Government-wide planning body?	X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 3,000 (est)

(b) Agency Budget (Thousands of Dollars) ____________

9. Library Budget

(a) Personnel ____________

(b) Equipment ____________

(c) Materials ____________

(d) Total ____________

10. Computer In-Library : Yes _____ No X Cost: ____________

In-Agency : Yes X No _____ ____________

Contract Svc : Yes X No _____ ____________

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	7			8		16	17	25
Filled	5	1		6		16	16	22
Vacancies	2			2			1	3

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief, Tech Lib Br.	1410	13	MSLS			X	X			28
Reference Librarian	1410	11	MSLS		X					15
Chief, Doc Sec	1410	12	BA/LS				X			15
Chief, Published Lit	1410	11	MSLS							
Chief, Biomedical Sec	1410	11								
Chief, Info Ret Sec	1412	12	HS					X	X	3

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	35, 000	2, 400	Dominant Subject : Chemical Agents	
Bound Per Vols	15, 000	100		
Per Subscriptions	1, 000	100	Other Subjects: Biochemistry Medicine Engineering Physics Ordnance	
Tech Reports (Uncl. HC)	225, 000			
Tech Reports (Class. HC)	135, 000			
TOTAL	360, 000	(est) 35, 000		
Microform	60, 000	24, 000		

2. Age of Library (est) 40 yrs.

3. (a) Size of Agency (est) 3,000
(b) Total potential User population ______
(c) Total active Users 1,250

4. Users by professional category
(1) Administrative and Management 6%
(2) Scientists and Engineers 58
(3) Technicians 18
(4) Lawyers -
(5) Government (Non-Agency) -
(6) General Public -
(7) Military Officers 18
(8) ______
(9) ______
(10) ______

5. Output Traffic

(a) Reference		(b) Circulation		
		Doc Circ	50,000	
Ready Ref.	20,000	ILL-loaned	2,500	(est)
Searches		-borrowed	2,700	
Bib. Searches		Journals Routed		
Referrals		Book Circ.	10,000	
		Total Circ.	65,200	

(c) SDI:
(1) Group Profiles (number) ______
(2) Individual Profiles (number) ______

6. Services of the Library

PRESENT	PLANNED
Group SDI via GAB Accessions Lists Bibliography Preparation Loan (Circ) of Specific Items Demand Translation Service + Translation Purchase Ready Reference Special Indexes to Reports	Remote Document Retrieval via Mosler 410 and CCTV terminals.

7. Special Problems of the Library

(1) A local EA thesaurus had to be developed and kept current.

(2) Computer retrieval of document numbers without citation information was not satisfactory for the users' needs.

(3) Microform is solving a critical space problem.

(4) Low computer time priority for library usage.

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)		
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(1) TAB card unit records punched for docs (2) Computer printouts aided thesaurus development efforts (4) MTST catalog card production	
(c) Reference Search, Referral, SDI, Retrieval	(3) Computer search of doc corpus, hits=accession nos.	[1]
(d) Publication and Printing		
(e) Circulation		

9. Future Plans

[1] Mosler 410 + CCTV for remote doc retrieval

[2] All journals to be put on microfiche

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro			(1)	(2)(4)	
3 Reference	Books Journals Documents Micro				(3)	[1]
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: NRL Technical Library Branch

Parents: Tech Info Div/Support Services Dept/NRL/ONR/Ass't Sec R&D/USN

1. Mission
   (a) Classification
   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		NRL/ONR	USN	Explicit Info. Mission	
Level					
Primary		RD	REG	Yes	No
Sec.		RD	EI		

2. Operational Subordinate Elements:
   (a) Size; (b) Relative number;
   (c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small		X	Yes	No
Large				X

3. Organizational Location:
   (a) Library
   (b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X			X
(b) ADP		X		X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)		X		

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	

	Yes	No
(b) Agency represented on Government-wide planning body?	X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?	X	

8. (a) Total size (employees) of Agency 3,500

(b) Agency Budget (Thousands of Dollars) ________

9. Library Budget

(a) Personnel	$350,000
(b) Equipment	
(c) Materials	250,000
(d) Total	$600,000

10. Computer In-Library : Yes _____ No X Cost: ________

In-Agency : Yes X No _____ ________

Contract Svc : Yes _____ No _____ ________

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?	X	
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	6		8	14	15	15	30	44
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Head Librarian	1410		MSLS	X		X	X			18
Deputy Librarian	1410		MSLS	X				X	X	22
Head, Doc Section			BS	X						8
Head, Bib Section	1410		MSLS		X					20
Br Libn at ONR	1410		MSLS		X					6

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	35,000	2,400	Dominant Subjects:	
Bound Per Vols	65,000	2,400	Physics Radio	
Per Subscriptions	2,000	80 (est)	Oceanography Chemistry	
Classified Tech Rpts	110,000	-	Mathematics + other pure applied science	
Unclass. Tech Rpts	240,000	-		
TOTAL DOCS	350,000	24,000		
Microfiche	40,000	18,000		

2. Age of Library 42 yrs

3. (a) Size of Agency 3,500
(b) Total potential User population -
(c) Total active Users 1,800

4. Users by professional category
(1) Administrative and Management 5%
(2) Scientists and Engineers 88
(3) Technicians 2
(4) Lawyers -
(5) Government (Non-Agency) -
(6) General Public -
(7) Military Officers 5
(8)
(9)
(10)

5. Output Traffic

(a) Reference		(b) Circulation	
		Doc Circ	48,000
Ready Ref.		ILL-loaned	4,800
Searches		-borrowed	2,400
Bib. Searches		Journal Circ.	
Referrals		Book Circ.	48,000
		Total Circ.	103,200

(c) SDI:
(1) Group Profiles (number)
(2) Individual Profiles (number)

6. Services of the Library

PRESENT	PLANNED
Accession Lists	SDI
Bibliography Preparation	Book-form author/title/subject catalog
Loan (Circ) of Specific Items	–
Demand Translation Service	
Ready Reference	
Duplication Service	

7. Special Problems of the Library

(1) Automation has imposed new tasks on the library technicians
(2) Lack of qualified people among job applicants
(3) Lack of computer time

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(2) Journal renewal lists (5b) Inventory control of Secret reports	[2]
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(1) Journal holdings list	[3]
(c) Reference Search, Referral, SDI, Retrieval		[1] [4]
(d) Publication and Printing		
(e) Circulation	(3) Distribution lists for tech rpts (4) Circ control for books and journals (5a) Circ of Secret reports	

9. Future Plans

[1] Automated SDI

[2] Journal anticipation file

[3] Computer produced book catalog for books and documents

[4] General, demand information retrieval

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books					
	Journals				(2) [2]	
	Documents				(5b)	
	Micro					
2. Input Process.	Books				[3, 4]	
	Journals				(1) [4]	
	Documents				[3, 4]	
	Micro					
3 Reference	Books					
	Journals				[1]	
	Documents				[1]	
	Micro					
4 Print & Publish	Books					
	Journals					
	Documents					
	Micro					
5 Circ.	Books				(4)	
	Journals				(4)	
	Documents				(3, 5a)	
	Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: NWL Technical Library Branch

Parents: Admin Services/Management Dept/ NWL/USN

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		NWL	USN	Explicit Info. Mission	
Level					
Primary		RD	REG	Yes	No
Sec.		RD	EI	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small			Yes	No
Large	X			X

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X			X
(b) ADP		X		X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)		X		

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
	X

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 2,000

(b) Agency Budget (Thousands of Dollars) ________

9. Library Budget (est)

(a) Personnel	$100,000
(b) Equipment	30,000
(c) Materials	60,000
(d) Total	$190,000

10. Computer In-Library : Yes ____ No X Cost: ________

In-Agency : Yes X No ____ ________

Contract Svc : Yes ____ No ____ ________

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	3	1		4			12	16
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Head, Tech Lib Br	1410		BA+					X	X	20
Head, Tech Processes	1410		Assoc. Degree				X	X		12
Librarian (Acq)	1410							X	X	
Tech Info Spec	1412					X				> 2
Book Section Supervisor	1410		MSLS					X	X	

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	27,500	2,500	Mathematics	30
Bound Per Vols	3,500	400	Electronics	25
Per Subscriptions	750	50	Ordnance	20
Classified Tech Repts (HC)	32,500	10,000	Physics Chemistry Metallurgy	15
Unclassified Tech Reports (HC)	32,500	10,000	Management	5
TOTAL Tech Rpts	65,000	20,000	Astronomy and Meteorology	5
Intelligence Docs	10,000	(2,000)		
Manuals	9,000	(200)		
Maps	1,000	(50)		
TOTAL Documents	85,000	(22,250)		
Tech Reports (Microfiche)	75,000	25,000		
Standards, Codes, Manuals, Catalogs, etc. (VSMF)	6,000			

2. Age of Library 16 yrs

3. (a) Size of Agency 2,000
(b) Total potential User population 2,000
(c) Total active Users 1,400 (est)

4. Users by professional category
(1) Administrative and Management 10%
(2) Scientists and Engineers 70
(3) Technicians 10
(4) Lawyers -
(5) Government (Non-Agency) -
(6) General Public -
(7) Military Officers 10
(8)
(9)
(10)

5. Output Traffic

(a) Reference		(b) Circulation	
		Document Circ	25,000
Ready Ref.		ILL-loaned	
Searches		-borrowed	
Bib. Searches		Journals Routed	
Referrals		Book Circ.	25,000
		Total Circ.	50,000

(c) SDI:
(1) Group Profiles (number)
(2) Individual Profiles (number)

6. Services of the Library

PRESENT	PLANNED
SDI Accessions Lists Periodical Routing Bibliography Preparation Literature Search Loan (Circ) of Specific Items Demand Translation Purchase Abstract Service (NWL reports) Ready Reference Duplication Service Special KWIC Indexes	Indexing and storing on microfiche of scientists' working papers and interim reports for local (in-laboratory) storage and retrieval. Document collection is now actively weeded. Weeding of the book collection is planned.

7. Special Problems of the Library

(1) Added service requirements

(2) Staff limitations

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)		
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(2a) 7090 Catalog Card Prep (Docs) (3) 7090 thesaurus code P/O (5a) 870 Catalog Card Prep (Docs) (7a) 870 Catalog Card Prep(Bks, Per) (8) Per Holdings List (7030)	[1]
(c) Reference Search, Referral, SDI, Retrieval	(1) 7090 search of docs (6) 7030 search of docs	[2]
(d) Publication and Printing	(2b) 7090 Accessions List Pub(Docs) (4) 7090 KWIC to NWL Docs & Bks (5b) 870 Accessions List Pub (Docs) (7b) 870 Accessions List Pub (Bks, Per)	
(e) Circulation	(9) Circ Control Cards (EAM) for all materials	

9. Future Plans

[1] Develop 7030 programs to automatically map postings from entry terms to USE references (index terms)

[2] Convert search file from tape to disk

[3] On line search

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books					
	Journals					
	Documents					
	Micro					
2. Input Process.	Books			(7a)		
	Journals			(7a)	(8)	
	Documents			(5a)	(2a, 3)[1]	
	Micro					
3 Reference	Books					
	Journals					
	Documents				(1, 6)[2]	[3]
	Micro					
4 Print & Publish	Books			(7b)	(4)	
	Journals			(7b)		
	Documents			(5b)	(2b, 4)	
	Micro					
5 Circ.	Books			(9)		
	Journals			(9)		
	Documents			(9)		
	Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: NOL Library Div

Parents: Engrg Svcs Dept/Asst Tech Div & Engrg Support/NOL/ USN

1. Mission
   (a) Classification
   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		NOL	USN	Explicit Info. Mission	
Level					
Primary		RD	REG	Yes	No
Sec.		RD	EI	X	

2. Operational Subordinate Elements:
   (a) Size; (b) Relative number;
   (c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small			Yes	No
Large	X			X

3. Organizational Location:
   (a) Library
   (b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X			X
(b) ADP		X		X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)		X		

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	

	Yes	No
(b) Agency represented on Government-wide planning body?		X

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 3,100

(b) Agency Budget (Thousands of Dollars) ______

9. Library Budget

(a) Personnel ______

(b) Equipment ______

(c) Materials ______

(d) Total ______

10. Computer In-Library : Yes ______ No X Cost: ______

In-Agency : Yes X No ______ ______

Contract Svc : Yes ______ No ______ ______

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	14			14			13	27
Filled	13			13			13	26
Vacancies	1			1				1

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief, Library Div	1410		BSLS			X	X			20
Chief, Ref Acq Br	1410		BA			X	X			17
Chief, Catlg Br	1410		BSLS			X	X			12
Librarians (3)	1410		MSLS						X	
Librarians (8)	1410				X					

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	37, 000	1, 000	Undersea Warfare Explosives	
Bound Per Vols	9, 000	200	Propellants	
Per Subscriptions	1, 000	50	Electrochemistry	
Classified Tech Reports	100, 000	4, 000	Magnetism	
Unclassified Tech Reports	100, 000	4, 000	Ordnance	
Intelligence Docs	20, 000	2, 000	Polymers	
Manuals	5, 000	500	Acoustics	
NOL Reports (10 copies of @)	13, 000	600	Materials Research Nuclear Phenomena	
Total HC Docs	238, 000	11, 100	Optics Mathematics	
Reports on Microfiche	60, 000	16, 000		
Reports on 16mm Microfilm	100, 000	20, 000		

2. Age of Library 28 yrs.

3. (a) Size of Agency 3, 100

(b) Total potential User population 3, 000

(c) Total active Users 1, 500

4. Users by professional category

(1) Administrative and Management 15 %

(2) Scientists and Engineers 70

(3) Technicians 10

(4) Lawyers 2

(5) Government (Non-Agency) -

(6) General Public -

(7) Military Officers 3

(8)

(9)

(10)

5. Output Traffic

(a) Reference		(b) Circulation	
		Doc Circ	211, 750
Ready Ref.		ILL-loaned	
Searches(est)	3, 000	-borrowed	
Bib. Searches		Journals Routed	4, 500
Referrals		Book Circ.	3, 300
		Total Circ.	219, 550

(c) SDI:

(1) Group Profiles (number)

(2) Individual Profiles (number)

6. Services of the Library

PRESENT	PLANNED
Accessions Lists - one @ for B, J, & D	
SDI (on 3 x5 cards)	SDI may be automated & formalized
Translation Purchase	
Computer search of report literature	
Literature Search	
Bibliography preparation	Library may begin purchasing all subscriptions for laboratory divisions
Loan (Circ) of Specific Items	
Ready Reference	
Periodical Routing	
Duplication Service	

7. Special Problems of the Library

1) Staff limitations
2) Space limitations
3) Training problems -- EDP training is desired

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(4a) K/P input of serials subscription data	[1]
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(1d) Microfilming of reports (1a) Flexowriter preparation of catalog cards for reports (3) Computer production of thesaurus & its accompanying codes & frequency counts (4b) 029 K/P input of serials data	[2]
(c) Reference Search, Referral, SDI, Retrieval	(2) Computer search of reports collection	[3, 4]
(d) Publication and Printing	(1a) Flexowriter prep of reports accession lists (5) EAM production of serials accession lists	
(e) Circulation	(1b) K/P prep of TAB charge cards for reports	

9. Future Plans

[2]	Computer produced book catalog for all materials
[1]	Computer-aided periodicals control (ordering, claiming, etc.)
[3]	Subject search of periodicals
[4]	SDI for all materials via computer profile match

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books					
	Journals			(4a)	[1]	
	Documents					
	Micro					
2. Input Process.	Books				[2]	
	Journals			(4b)	[2]	
	Documents			(1a)	(3) [2]	
	Micro					
3 Reference	Books				[4]	
	Journals				[3, 4]	
	Documents				(2) [4]	
	Micro					
4 Print & Publish	Books			(5)		
	Journals					
	Documents			(1c)		
	Micro					
5 Circ.	Books					
	Journals					
	Documents			(1b)		
	Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: National Bureau of Standards Library

Parents: NBS; USDC

1. Mission

(a) Classification

(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		USDC	NBS	**Explicit Info. Mission**	
Level					
Primary		EI	RD	**Yes**	**No**
Sec.		RD	EI	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small	X		**Yes**	**No**
Large				X

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library		X		X
(b) ADP	X		X	

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?		X
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)			X	
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?		X

	Yes	No
(b) Agency represented on Government-wide planning body?	X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 3,725

(b) Agency Budget (Thousands of Dollars) $41,600

9. Library Budget

(a) Personnel	FY '66	$ 171,528
(b) Equipment }		
(c) Materials }		90,167
(d) Total		$ 261,695

10. Computer In-Library: Yes ____ No x Cost: ____
In-Agency : Yes X No ____ ____
Contract Svc: Yes ____ No ____ ____

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized				10	9	-	9	19
Filled	5			9	9		9	18
Vacancies				1			0	1

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Head Librarian	1410		PhD/ LS	No			X			6*
-	1410		MSLS				X			20
-	1410		MSLS							9**
-	1410		MSLS		X					
-	1410		MSLS		X					

* 6 yr at NBS; formerly LC, yrs unknown

** 9 at NBS; Former NLM

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books and Bound Periodicals	125,000* vols	980 vol	Mathematics	
			Physics	
Periodical Subs	3,000 titles		Chemistry	
			Chem. Tech.	
Unclass. TR's (HC)	15,000 titles		Engineering	
			Economics	
Class. TR's (HC)	None		Agriculture and Industry	
Manuals	24 lin shlv. ft.		Astronomy	
			Statistics	
Catalogs	Few		Computer Science	
Microfiche	None		Finance	

* Book Acquisition rate, previous years:

FY	Number
65	1879
66	1715
67	1590
68	980

2. Age of Library 67 yrs

3. (a) Size of Agency 3,725
   (b) Total potential User population 2,889
   (c) Total active Users 1,050

4. Users by professional category
   (1) Administrative and Management 10%
   (2) Scientists and Engineers 65
   (3) Technicians 15
   (4) Lawyers -
   (5) Government (Non-Agency) -
   (6) General Public 10
   (7)
   (8)
   (9)
   (10)

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.		ILL-loaned	
Searches		-borrowed	
Bib. Searches		Journals Routed	
Referrals		Book Circ.	
		Total Circ.	24,000

   (c) SDI:
   (1) Group Profiles (number)
   (2) Individual Profiles (number)

* Average monthly for FY 68 (total) 1986; For December 68, this broke down as Books, 595; Serials, 935; and Reports, 13.

6. Services of the Library

PRESENT	PLANNED
Monthly Accessions List including Books, Journals, Reports and Translations Periodical Routing (attempt to limit this) Manually prepared bibs. Loan of specific items Abstract Bulletins such as STAR, TAB, etc. for reference use in library only On demand translations (In house or JPRS) Reproduction service (after check-out only) Specialized indexes (few)	None

7. Special Problems of the Library

(1) Users complain about Xerox down time.

(2) Circulation system clumsy (too long to fill out NBS Form 23).

(3) Journals on 1 week loan; books on 2 weeks.

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	None	None
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing		
(e) Circulation		

9. Future Plans

No specific automation plans have been developed. Now trying to "systematize" manual operations.

10. Sequence of Automation Steps: (None presently planned)

		Class of Equipment				
Function	Materials	I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Atmospheric Sciences Library

Parents: Libraries Branch (ESSA); SIDD; ESSA;USDC

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		USDC	ESSA	**Explicit Info. Mission**	
Level					
Primary		EI	RD	**Yes**	**No**
Sec.		RD	SPT	X	

2. Operational Subordinate Elements:

(a) Size;(b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large		X	X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X		X	
(b) ADP	X		X	

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)	X			
(b)		X		

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	

	Yes	No
(b) Agency represented on Government-wide planning body?	X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 7,693

(b) Agency Budget (Thousands of Dollars) $176,756

9. Library Budget

(a) Personnel ______

(b) Equipment ______

(c) Materials ______

(d) Total Not available

10. Computer In-Library: Yes ____ No X Cost: ______

In-Agency: Yes X No ____ ______

Contract Svc: Yes ____ No X ______

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?	X	
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	**PROFESSIONAL**				**NON-PROF.**			**TOTAL**
CSC Code	**1410**	**1412**	**Other**	**Total**	**1411**	**Other**	**Total**	
Authorized	5							
Filled*	3						9	21
Vacancies								

*As of FY 66, Kruzas says 12 professional + 9 non-professionals.

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
	1410		BSLS	-				X	X	30
	1410		AB/LS	-	X					46
	1410		BLS	-	X					47
Mgr. Libraries Br.	1410		MS	X			X			13
Asst Chief., Lib. Br.	1410		MA (BLS)				X			10

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books, Periodicals and reports	175, 000 vols	5, 000	Meteorology	75
			Climatology	
Journal Subs	457 titles	-	Hydrology	
			Oceanography	
			"Related" Sciences	23
			Reference works	2

2. **Age of Library** 99 yrs

3. **(a) Size of Agency** 7,693
(b) Total potential User population 4,000
(c) Total active Users 1,000

4. **Users by professional category**
   - **(1) Administrative and Management** 2%
   - **(2) Scientists and Engineers** 75
   - **(3) Technicians** 15
   - **(4) Lawyers** -
   - **(5) Government (Non-Agency)** -
   - **(6) General Public** 7
   - (7) Military 1
   - **(8)**
   - **(9)**
   - **(10)**

5. **Output Traffic**

(a) Reference

Ready Ref.
Searches
Bib. Searches
Referrals

(b) Circulation

ILL-loaned
-borrowed
Journals Routed
Book Circ.
Total Circ. 26,500 (not broken down)

(c) SDI:
(1) Group Profiles (number)
(2) Individual Profiles (number)

6. Services of the Library

PRESENT	PLANNED
Informal SDI Accessions List Bibliography preparation Loan of specific items Ready reference Duplication service Literature search	ESSA-wide network in state of planning (unspecified as yet); new services to be incorporated not known.

7. Special Problems of the Library

(1) Staff limitations

(2) Delays in receipt of ILL materials

8. Present and Planned Automated Functions (ASL/GSL both)

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	None	
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		[1] [2]
(d) Publication and Printing		
(e) Circulation		

9. Future Plans

[1] Demand bibliographies

[2] "Research in Progress" reports

Network plans not yet fully developed.

10. Sequence of Automation Steps: (ASL/GSL both)

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro				[1] [1] [2]	
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Geophysical Sciences Library

Parents: Library Branch; SIDD; ESSA; USDC

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		USDC	ESSA	**Explicit Info. Mission**	
Level					
Primary		EI	RD	**Yes**	**No**
Sec.		RD	SPT	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large		X	X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X		X	
(b) ADP	X		X	

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moder-ate	Small	None
(a)	X			
(b)		X		

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
X	

7. Library Budget is Line-Item in:

(a) The budget of immediate parent?

(b) The budget of the Agency?

	Yes	No
(a)	X	
(b)		X

8. (a) Total size (employees) of Agency 7,693

(b) Agency Budget (Thousands of Dollars) $176,756

9. Library Budget

(a) Personnel ____________

(b) Equipment ____________

(c) Materials ____________

(d) Total ____________

10. Computer In-Library : Yes _____ No __X__ Cost: ____________

In-Agency : Yes __X__ No _____ ____________

Contract Svc : Yes _____ No __X__ ____________

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?	X	
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	4							
Vacancies								

Kruzas reports (FY 66) 7 professionals
3 non-professionals

17. Library Staff Training and Experience (Professional) (GSL)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
	1410		BLS				X			25
	1410		MLS						X	25
	1410		DIPL/ LS				X			19
	1410		MLS				X			12
See ASL summary for Chief and Assistant over Libraries Branch.										

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books, Periodicals and Reports	145,000	4,000	Photogrammetry	70
			Oceanography	
Journal Subs	500	-	Hydrography	
			Seismology	
			Geomagnetism	
			"Related"Sciences	22
			Reference works	8

2. **Age of Library** 129 yrs

3. **(a) Size of Agency** 7,693

(b) Total potential User population 3,000

(c) Total active Users 1,000

4. **Users by professional category**

(1) Administrative and Management 4%

(2) Scientists and Engineers 73

(3) Technicians 10

(4) Lawyers 5

(5) Government (Non-Agency) -

(6) General Public (institutional) 8

(7)

(8)

(9)

(10)

5. **Output Traffic**

(a) Reference		**(b) Circulation**	
Ready Ref.		**ILL-loaned**	
Searches		**-borrowed**	
Bib. Searches		**Journals Routed**	X
Referrals		**Book Circ.**	
		Total Circ.	37,600 (not broken down)

(c) SDI:

(1) Group Profiles (number)

(2) Individual Profiles (number)

6. Services of the Library

PRESENT	PLANNED
Informal SDI Accessions List Periodical routing Bibliography preparation Loan of specific items Duplication service Literature search Ready reference	ESSA wide network; new services as yet unspecified.

7. Special Problems of the Library

(1) Staff limitations

(2) Delays in receipt of ILL materials

8. Present and Planned Automated Functions (GSL)

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	None	See under ASL summary
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing		
(e) Circulation		

9. Future Plans

ESSA "Network"

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Boulder Laboratory Library

Parents: (Exact immediate parentage not known): ESSA:USDC

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency				Explicit Info. Mission	
Level					
Primary				Yes	No
Sec.				X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small			Yes	No
Large				

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library				
(b) ADP				

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?	☐	☐
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	☐	☐
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	☐	☐
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	☐	☐

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)				
(b)				

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?		

	Yes	No
(b) Agency represented on Government-wide planning body?		

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?		
(b) The budget of the Agency?		

8. (a) Total size (employees) of Agency ____________

(b) Agency Budget (Thousands of Dollars) ____________

9. Library Budget	F Y '66
(a) Personnel	$ 80, 900
(b) Equipment	39, 000
(c) Materials	
(d) Total	$119, 900

10. Computer In-Library: Yes _____ No X Cost: ____________

In-Agency : Yes X No _____ ____________

Contract Svc: Yes _____ No _____ ____________

	Yes	No
11. Does Library Administrator have dual line/staff role?		
12. Is he under tight administrative control?		
13. Does Library have high intra-Agency coordination requirements?		
14. Does Library have in-house planning/ feasibility study capability?		
15. Does Library or direct parent have design and development capability?		

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	6	2*		8	5	1	6	14
Vacancies								

*In Divisions

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief Librarian**	1410	12					X			-
	1410	11								
	1410	11								
	1410	9								
	1410	9								
	1410	7								
*	1412 1412									

* in divisions

** Grade for Chief

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Technical Books	42,000 vols	2,680	Physics Radio Geo Atmospheric Astro Solar Plasma	30
HC Technical Rpts	70,000 titles	36,000		
Microfiche TR's	70,000 titles	26,000		
Bound Periodicals	13,000 vols		Mathematics Statistics Computer Science	20
Journal Subs	1,800* titles	68* titles	Astronautics Chemistry Oceanography Radio Frequency assignment Misc NBS Pubs.	20
Equipment Manuals	-	-		
			Science & Engineering (General)	10

* 1068 house in library remainder in offices and laboratories.

2. Age of Library 18 yrs

3. (a) Size of Agency ______
(b) Total potential User population ______
(c) Total active Users ______

4. Users by professional category
(1) Administrative and Management ______
(2) Scientists and Engineers est. 90%
(3) Technicians ______
(4) Lawyers ______
(5) Government (Non-Agency) ______
(6) General Public ______
(7) ______
(8) ______
(9) ______
(10) ______

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	4800/yr	ILL-loaned	500
Searches		-borrowed	1,500
Bib. Searches		Journals Routed	
Referrals		Book Circ.	11,990
		Total Circ.	21,000*

(c) SDI:
(1) Group Profiles (number) ______
(2) Individual Profiles (number) ______

* includes 2900 HC Technical Reports and 350 microfiche Technical Reports + ILL.

6. Services of the Library

PRESENT	PLANNED
Informal SDI (rarely) Accessions List Bibliography preparation Loan of specific items Journal Routing Translation Referral Service Ready reference Annual (computer prepared) List of Periodical Holdings Reproduction services (in-house but not in library) No search service	Demand bibliographies Research-in-progress reports

7. Special Problems of the Library

(1) Space limitations

(2) Staff limitations

(3) Unwieldy procurement system leading to long delays.

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(3) Serials ordering (CDC 3800)	
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		[1] [2]
(d) Publication and Printing	(1) Union List of serials with NCAR (2) Annual Bib. of Sci. & Tech. Publications	
(e) Circulation	● Telefax (ASL/GSL/Boulder) to facilitate ILL. (not known when this was installed)	

9. Future Plans

[1] Demand bibliographies

[2] Expansion of retrieval capabilities (research for progress)

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books					
	Journals				(3)	
	Documents					
	Micro					
2. Input Process.	Books					
	Journals					
	Documents					
	Micro					
3 Reference	Books					
	Journals				[1]	
	Documents				[1]	
	Micro					
4 Print & Publish	Books					
	Journals				(1) (2)	
	Documents				(2) [2]	
	Micro					
5 Circ.	Books					
	Journals					
	Documents					
	Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: NIH HQ Library

Parents: Div of Research Svcs/Assoc. Dir., Direct Research/NIH/PHS/HEW

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		NIH	HEW	**Explicit Info. Mission**	
Level					
Primary		RD	EI	**Yes**	**No**
Sec.		EI	RD	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small			**Yes**	**No**
Large	X			X

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library		X		X
(b) ADP		X		X

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?		X
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
X	

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 12, 230

(b) Agency Budget (Thousands of Dollars) $1, 499, 449

9. Library Budget

(a) Personnel ________

(b) Equipment ________

(c) Materials ________

(d) Total ________

10. Computer In-Library : Yes ____ No X Cost: ________

In-Agency : Yes X No ____ ________

Contract Svc : Yes ____ No ____ ________

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	22	6		28	26		26	54
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
	1410(20)									
	1411(25)									
	1412(5)	(2 are programmers)								
	1410(2)									
	1411(1)	Branches								
	1412(1)									

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	30,000 vols	Not Avail.	Biochemistry	
			Biometrics	
Bound Periodicals	65,000 vols	"	Biophysics	
			Clinical Medicine	
Microfiche	4,500 titles	"	Comparative Anatomy	
			Instrumentation	
Journal Subs	2,800 titles	"	Microbiology	
			Mental Health	
			Pharmacology	
			Zoology	

2. Age of Library 66 yrs

3. (a) Size of Agency ____
(b) Total potential User population ____
(c) Total active Users ____

4. Users by professional category
(1) Administrative and Management ____
(2) Scientists and Engineers ____
(3) Technicians ____
(4) Lawyers ____
(5) Government (Non-Agency) ____
(6) General Public ____
(7) ____
(8) ____
(9) ____
(10) ____

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	____	ILL-loaned	____
Searches	____	-borrowed	____
Bib. Searches	____	Journals Routed	____
Referrals	____	Book Circ.	____
		Total Circ.	____

(c) SDI:
(1) Group Profiles (number) ____
(2) Individual Profiles (number) ____

6. Services of the Library

PRESENT	PLANNED
	Bibliographic Retrieval of NIH data bases.

7. Special Problems of the Library

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(3) IBM/870; Process list, Journals only (1965)	[1] [2]
(b) Input Processing Physical Process. Descr. & Subj. Tagging		[2]
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing	(4) Computer production (IBM 360/30) of book list; periodical list.	
(e) Circulation	(1) Microfilm journal articles on request; blowback via Copyflo (1961) (1a) Translations microfilmed yearly; HC destroyed; blowback to fill requests (2) Copy request fulfillment via Xerox (1963)	[3] [2]

9. Future Plans

[1] Books and Monographs
[2] Serials Control
[3] Circulation

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books				[1]	
	Journals			(3)	[2]	
	Documents					
	Micro					
2. Input Process.	Books			[2]*		
	Journals				[2]	
	Documents					
	Micro					
3 Reference	Books					
	Journals					
	Documents					
	Micro					
4 Print & Publish	Books				(4)	
	Journals				(4)	
	Documents					
	Micro					
5 Circ.	Books				[3]	
	Journals		(1) (2)		[2]	
	Documents					
	Micro		(1)			

( ) Past [ ] Future

*Alternative use of 870.

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: FDA HQ Library

Parents: Lit Services Staff/SIF/Assoc Comm Sci/FDA/CP&EHS/HEW

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency	FDA	CPEHS	HEW	**Explicit Info. Mission**	
Level					
Primary	REG	REG	EI	**Yes**	**No**
Sec.	RD	RD	RD		X

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large	X		X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library				X
(b) ADP				

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)	X			
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	

	Yes	No
(b) Agency represented on Government-wide planning body?		X

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 4,280

(b) Agency Budget (Thousands of Dollars) $72,698

9. Library Budget

	Med Lib	HQ
(a) Personnel	$356,000	$233,000
(b) Equipment		
(c) Materials	20,000	42,000
(d) Total	$376,000	$ 275,000

10. Computer In-Library : Yes _____ No X Cost: _____

In-Agency : Yes X No _____

Contract Svc : Yes X No _____

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?		X
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	5	1		6			4	10
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief Librarian	1410		MSLS			X				
Acq. Librarian	1410		MSLS		X					
Cataloger Libn.	1410		MSLS		X					
Ref Librarian	1410		MSLS (cand)		X					
Ref Librarian	1410		BA		X					
Ref Librarian	1412		BA				X	X		
Lib Tech.	1411(3)		-		X					
Circ. Clerk	1411		HS							

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books	8, 950 vol	2, 300	Chemistry	
Bnd Periodicals	5, 850 vol		Biosciences Bacteriology Microbiology	
Per Subs	1, 100 titles	60	Food Technology	
Unclass. TR's	100 titles			
Journal Lit on microfilm				
(a) 16 mm cartridge	457 vols 614 cartidges			
(b) 35 mm roll	231 vol ? rolls			
FDA Manuals	3 lin. shelf ft.			
Phono discs	< 10			

2. Age of Library 8 yrs

3. (a) Size of Agency 4,280

(b) Total potential User population 1,800

(c) Total active Users 600-700

4. Users by professional category

(1) Administrative and Management 15%

(2) Scientists and Engineers 85

(3) Technicians ______

(4) Lawyers few

(5) Government (Non-Agency) ______

(6) General Public (via ILL) some

(7) Also loans to pharmacists, doctors, ______

(8) hospitals ______

(9) ______

(10) ______

5. Output Traffic

(a) Reference		(b) Circulation	
		Other	800
Ready Ref.	1,740	ILL-loaned	2,800
Searches	450	-borrowed	
Bib. Searches	20-30	Journals Routed	1,600
Referrals (incl	in Ready Reference)	Book Circ.	6,100
		Total Circ.	11,300

(c) SDI:

(1) Group Profiles (number) ______

(2) Individual Profiles (number) ______

Translations - approx 30/yr

Other Circulation

FDA Publications	10
Microfiche	35
Phonodiscs	5
Hard Copy Repro	750

6. Services of the Library

PRESENT	PLANNED
SDI Group; manual; specific sub Accessions list (monographs) Periodical routing - Med. Lib. Bibliographies Extra-mural search services Loan (Specific Items) Informative abstract "FDA Clinical Experience Abstracts" published Med Library (GPO prints); Journal literature Translations - purchased(JPRS) Ready Reference Photo-duplication(self services)	Central processing for field/ regional office collections.

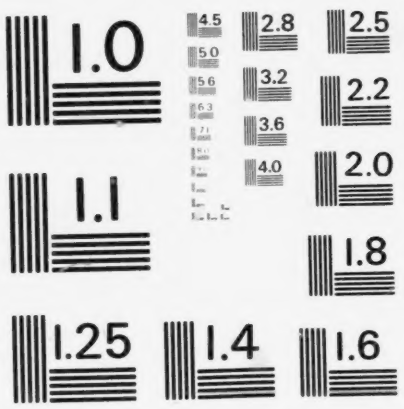
7. Special Problems of the Library

(1) No EDP staff in the library, to aid in system development changes, etc., System has fallen into disuse.
(2) Formatting and scheduling due to low priority access to machine.
(3) Limitations on staff and budget made automation necessary (had planned 28 auth for FY 67 - have 10 in 69)
(4) Foresees space problem.

6 OF 7

ED

030773


1.0
4.5
5.0
5.6
6.3
7.1
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.1
1.8
1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 - A

8. Present and Planned Automated Functions (Automation/FDA)

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(1) All serial acquisition functions except claiming	[1]
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(1) Holdings list. (Ser. Only)	
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing(including duplicating)		
(e) Circulation		

9. Future Plans

[1] Use of MTST

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M.	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro				(1) [1]	
2. Input Process.	Books Journals Documents Micro				(1)	
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

Due to unavailability of machine time, system has fallen into disuse. Postings now maintained manually.

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Nat'l Clearinghouse for Mental Health Information

Parents: Office of Communications/NIMH/HS + MHA/PHS/HEW

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency	NIMH	HS MHA	HEW	**Explicit Info. Mission**	
Level					
Primary	EI	EI	EI	**Yes**	**No**
Sec.	RD	RD	RD	X	

2. Operational Subordinate Elements:

(a) Size; **(b)** Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large			X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X		X	
(b) ADP	X			X

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?		X
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moder-ate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
	X

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?	X	

8. (a) Total size (employees) of Agency 2, 937

(b) Agency Budget (Thousands of Dollars) $377, 299

9. Library Budget

(a) Personnel ____

(b) Equipment ____

(c) Materials ____

(d) Total $610, 000 est

10. Computer In-Library : Yes ____ No X Cost: ____

In-Agency : Yes X No ____ ____

Contract Svc : Yes ____ No X ____

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								28
Filled		1	13	14			10	24
Vacancies								4

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief			MD Psychst.				X			3
Asst Chief			"				X			2
Sci. Dir			PhD							
Chief, Prof. Svcs.			BA		X					5
Psychologists (3)			PhD's							
Tech Info Spec (1)	1412									
Clerks (3)										
Chief, Tech Info Sect			BS	X				X	X	16 (2 at NIMH)
Professional (6)										
Non-professional (7)										

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books					
	Journals		(4) *			
	Documents		(4) *			
	Micro					
2. Input Process.	Books					
	Journals				(1)	
	Documents					
	Micro					
3 Reference	Books					
	Journals				(2) [3]	[2]
	Documents				[3]	
	Micro					
4 Print & Publish	Books				[4]	
	Journals				(3)[1][4]	
	Documents				[4]	
	Micro					
5 Circ.	Books					
	Journals					
	Documents					
	Micro					

( ) Past [ ] Future

* - Acme Visi-File for input transaction records.

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: National Agricultural Library

Parents: Directorate of Science & Education/ USDA

1. Mission
   (a) Classification
   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		USDA	Sci. &Ed.	Explicit Info. Mission	
Level					
Primary		EI	RD	Yes	No
Sec.		REG		X	

2. Operational Subordinate Elements:
   (a) Size; (b) Relative number;
   (c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small		X	Yes	No
Large		X	X	

3. Organizational Location:
   (a) Library
   (b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library		X		X
(b) ADP				X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
X	

7. Library Budget is Line-Item in:

(a) The budget of immediate parent?

(b) The budget of the Agency?

	Yes	No
(a)	X	
(b)	X	

8. (a) Total size (employees) of Agency 86,400

(b) Agency Budget (Thousands of Dollars) $7,402,306

9. Library Budget (Thousands of Dollars) Other $1,264,

(a) Personnel 1,741,

(b) Equipment 210,

(c) Materials 12,

(d) Total 3,227,

10. Computer In-Library : Yes X (physically) No ____ Cost: None

In-Agency : Yes ____ No ____ ____

Contract Svc : Yes X No ____ ____

*Note: Yes for PIC; No for Main Library

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/ feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								213
Filled								170
Vacancies								43

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years

Note: No information available specifically; all library data obtained incidental to administrative interview. Many with high level experience and training, both in library subjects and in ADP.

LIBRARY TECHNICAL DATA

1. Holdings and Growth Rate:

TYPE MATERIALS	NO. (Thous.)	GROWTH	SUBJECT CATEGORIES	%
Books, Bd. Per.	1,300,	17,000 vol.	General Agriculture Ag. Societies, etc.	
Per.. Issues		217,173	Ag. Science - (animal and vet. science)	
Serial subscr.	22 titles		Plant Science Ag. Chem. Ag. Engineering Soils, fertilizers & soil conservation Forestry & forest product tech. Ag. Products Home Economics Rural Sociology Ag. Economics Statistics	

2. Age of Library 107 yrs.

3. (a) Size of Agency 86,400
(b) Total potential User population -
(c) Total active Users -

4. Users by professional category
(1) Administrative and Management 5
(2) Scientists and Engineers } 56
(3) Technicians
(4) Lawyers 6
(5) Government (Non-Agency) 10
(6) General Public 15
(7) Soc. Scientists 8
(8)
(9)
(10)

5. Output Traffic

(a) Reference		(b) Circulation		
Ready Ref.		ILL-loaned		
Searches		-borrowed		
Bib. Searches		Journals Routed	Yes	
Referrals		Book Circ.		
Total	111,217	Total Circ.	247,795	(incl ILL)

(c) SDI: *
(1) Group Profiles (number) Yes
(2) Individual Profiles (number) Yes

* Both informal

6. Services of the Library

PRESENT	PLANNED
Informal SDI Accessions Lists: BofA, PDB, New Book Shelf Periodical Routing Bib Clearinghouse Bib Prep Lit Search (Manual) - available to public for a fee Title Lists (Reading Lists) Specific items loaned Ready Reference Translation Clearinghouse Photoduplication service Ag Documentation Clearinghouse	

7. Special Problems of the Library

(1) Unable to fill staff vacancies (43 vacancies; total)
(2) Some support personnel are graded lower than comparable positions in other national libraries; makes staffing even more difficult.
(3) Field users are experiencing delays stemming from staff limitations at the library.
(4) Early attempts at using OCR disappointing; now abandoned.
(5) Schedule over-runs on automation development efforts.

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?		X
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	2	3	-	5	1	4	5	10
Filled	2	3	-	5	1	4	5	10
Vacancies	0	0	-	0	-	-	0	0

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief	1410		BS	No			X	X		17
Asst Chief	1410		MSLS	-			X	X		6
Chemist	1320		BA	Yes		X	X			5
Tech Info Spec	1412		MS	Yes			X		X	15
Tech Info Spec	1412		BS	-		X				(2)*

* 2 yrs at PIC; other unknown

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Pesticides Journal Article Citations (+ some abstracts)	35,000 articles	40,000 per yr.	Entomology	
			Crop Protection	
			Livestock protection	
Forest Pathology abstracts (INTREDIS)	20,000 articles	2,000 items/yr	Commodity protection	
Herbicide Test Records	2,000 tests	150/yr	Environmental contamination	
			Residues	
			Toxicology	
			Plant physiology & biochemistry	
			Chemistry	
			Engineering	
			Industrial applications	

2. Age of Library 4 yrs

3. (a) Size of Agency 86,400
(b) Total potential User population 10,000 (est)
(c) Total active Users 2,500

4. Users by professional category
(1) Administrative and Management ______
(2) Scientists and Engineers 70%
(3) Technicians ______
(4) Lawyers ______
(5) Government (Non-Agency) ______
(6) General Public (Teachers & others) 19%
(7) Librarians 11%
(8) ______
(9) ______
(10) ______

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.		ILL-loaned	
Searches		-borrowed	
Bib. Searches	260/yr	Journals Routed	
Referrals	?	Book Circ.	
		Total Circ.	-

(c) SDI:
(1) Group Profiles (number) -
(2) Individual Profiles (number) -

6. Services of the Library

PRESENT	PLANNED
Demand search Pesticides Documentation Bulletin Referral	SDI (2 years from now; for USDA personnel)

7. Special Problems of the Library

- Communication delay between users and PIC.

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)		[1]
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval	(4) Demand search (360)	[2]
(d) Publication and Printing(including duplicating)	(1) KWIC Index to selected Periodicals - 360. (2) Change to KWOC for index to periodicals (3) Linotron printing of PDB	
(e) Circulation		

9. Future Plans

[1] Adding files to increase coverage (both depth & scope)

[2] SDI

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M.	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books					
	Journals				[1]	
	Documents				[1]	
	Micro					
2. Input Process.	Books					
	Journals					
	Documents					
	Micro					
3 Reference	Books					
	Journals				(4) [2]	
	Documents				(4) [2]	
	Micro					
4 Print & Publish	Books					
	Journals				(1)(2)(3)	
	Documents				(1)(2)(3)	
	Micro					
5 Circ.	Books					
	Journals					
	Documents					
	Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Internal Revenue Service HQ Library

Parents: Operations & Planning Div/Office of Chief Counsel/GC, USDT (Line) + Commissioner, IRS (Staff)/USDT

1. Mission
   (a) Classification
   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		IRS	USDT	Explicit Info. Mission	
Level					
Primary		REG	REG	Yes	No
Sec.		SPT	SPT		X

2. Operational Subordinate Elements:
   (a) Size, (b) Relative number;
   (c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small		X	Yes	No
Large			X	

3. Organizational Location:
   (a) Library
   (b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X		X	
(b) ADP	X			X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

2. Age of Library 52 yrs

3. (a) Size of Agency 66, 665
(b) Total potential User population ______
(c) Total active Users 800 (est)

4. Users by professional category
(1) Administrative and Management 18%
(2) Scientists and Engineers ______
(3) Technicians ______
(4) Lawyers 80
(5) Government (Non-Agency) 2
(6) General Public ______
(7) ______
(8) ______
(9) ______
(10) ______

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	?	ILL-loaned	
Searches		-borrowed	
Bib. Searches		Journals Routed	
Referrals		Book Circ.	
		Total Circ.	?

(c) SDI:
(1) Group Profiles (number) ______
(2) Individual Profiles (number) ?

6. Services of the Library

PRESENT	PLANNED
Informal SDI Accession Lists List of Missing Books Periodical Routing Loan (Circ) of Specific Items - Limited Ready Reference Photo-duplication Service - Limited Special Index to IRS Cases Dictaphone Transcription Service	No new services planned

7. Special Problems of the Library

New facilities occupied in 1968 solved earlier problems of limited space and uncomfortable working conditions.

8. Present and Planned Automated Functions No Automation

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)		
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing		
(e) Circulation		

9. Future Plans

No Automation Plans

10. Sequence of Automation Steps: No Automation

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: IRS Reports & Info Retrieval Activity

Parents: Operations & Planning Div/Office of Chief Counsel/GC,
USDT (Line) + Commissioner, IRS (Staff)/USDT

1. Mission
   - (a) Classification
   - (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		IRS	USDT	Explicit Info. Mission	
Level					
Primary		REG	REG	Yes	No
Sec.		SPT	SPT		

2. Operational Subordinate Elements:
   - (a) Size; (b) Relative number;
   - (c) Geographical dispersion

Size	Number		Widely Dispersed	
	Few	Many		
Small		X	Yes	No
Large			X	

3. Organizational Location:
   - (a) Library
   - (b) ADP Support

Attachment	Admin. Spt.	Res & Devel.	Staff	Line
(a) Library	X		X	
(b) ADP	X			X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)	X			
(b)	X			

6. Information Planning:

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
	X

7. Library Budget is Line-Item in:

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 66,665

(b) Agency Budget (Thousands of Dollars) $1,026,055

9. Library Budget

(a) Personnel ______

(b) Equipment ______

(c) Materials ______

(d) Total ?

10. Computer In-Library : Yes ______ No X Cost: ______

In-Agency : Yes X No ______ ______

Contract Svc : Yes X No ______ ______

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?	X	
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled				3			3	6
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
RIRA Branch Chief						X		X		
Secretary						X				
Systems (Analysts)								X	X	
EDP Technician								X	X	
Clerical Technician						X				

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books					
	Journals					
	Documents					
	Micro					
2. Input Process.	Books					
	Journals					
	Documents					
	Micro					
3 Reference	Books					
	Journals					
	Documents				[4]	
	Micro				[4]	
4 Print & Publish	Books					
	Journals					
	Documents			(1)	(2)	
	Micro			(1)	(2)	
5 Circ.	Books					
	Journals					
	Documents					
	Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: HQ Library

Parents: Office of General Services/Asst Sec, Admin/HUD

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency			HUD	**Explicit Info. Mission**	
Level					
Primary			EI	**Yes**	**No**
Sec.			RD		X

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large	X		X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X			X
(b) ADP	X			X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?		X
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)	X			
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?		X

	Yes	No
(b) Agency represented on Government-wide planning body?		X

7. Library Budget is Line-Item in:	Yes	No
(a) The budget of immediate parent?		X
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 16, 800

(b) Agency Budget (Thousands of Dollars) $2, 928, 000

9. Library Budget

(a) Personnel ______

(b) Equipment ______

(c) Materials ______

(d) Total ?

10. Computer In-Library : Yes ____ No X Cost: ______

In-Agency : Yes X No ____ ______

Contract Svc : Yes ____ No ____ ______

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	18			18	6	5	11	29
Filled	18			18	5	4	9	27
Vacancies					1	1	2	2

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Library Director	1410		MSLS				X			28
Secy	0318		HS							
Reader Services Br										
Chief	1410		MSLS				X			19
Ref Sec Chief	1410		MSLS							10
4 Librarians	1410		MSLS						(3) X	
Bib Sec Chief	1410		MSLS							4
1 Librarian	1410		MSLS						X	
1 Other	-									
Law Sec Chief	1410		BSLS							20
1 Other	-									
Circ Sec Chief	1410		BSLS							20
1	1411									
Tech Services Br										
Chief	1410		MSLS				X	X		>10
Cat Sec Chief	1410		MSLS							10
3	1410								(1) X	
2	1411									
1	Other									
Acq Sec Chief	1410		MSLS							10
1	1410									
1	1411									
2 Vacancies										
1	1411									
Other	Unknown									

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books, Monographs and pamphlets	300,000		Law	
		31,000 pieces	Housing	
Periodicals	100,000		Mortgage Finance	
Periodical subs	1,200 titles	-	Architecture	
			Land Planning	
			Soil Mechanics	
			Engineering	
			Urban Planning	
			Urban Renewal	
			Building Industry	
			Mass Transportation	
			Economies	
			Sociology	

2. Age of Library 35 yrs

3. (a) Size of Agency 16,800
(b) Total potential User population 5,000
(c) Total active Users 2,500 (Est.)

4. Users by professional category
(1) Administrative and Management ________
(2) Scientists and Engineers ________
(3) Technicians ________
(4) Lawyers 250
(5) Government (Non-Agency) ________
(6) General Public ________
(7) ________
(8) ________
(9) ________
(10) ________

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	18,200	ILL-loaned	
Searches		-borrowed	
Bib. Searches		Journals Routed	350
Referrals		Book Circ.	
		Total Circ.	43870 including ILL

(c) SDI:
(1) Group Profiles (number) Not Offered
(2) Individual Profiles (number) " "

6. Services of the Library

PRESENT	PLANNED
Reference Route Journals Periodicals Accessions List Special Bibs Manual SDI (Informal) In-house translation - Russian, Polish, and most Western European languages.	

7. Special Problems of the Library

None cited.

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?	X	

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized	15				5			20
Filled	15				5			20
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Dep Lib			PhD (cand)	X				X	X	16
Head Ref Lib			MSLS	X			X			3(AEC)
Ser Lib			HS				X	X		6
Syst Lib			PhD (cand)	X				X	X	8
Info Spec			MS	X			X			15

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH
Books	20,000 vol	2300
Per. Titles	1,080 titles	-
Per. Subs	1,620	60
Unclass TR/HC	10,000	1600
Class TR/HC	6,500	4800
Equip Cat Directives Stds & Codes	Some	
Class TR (mFc) Unclass TR(mFc)		6400

SUBJECT CATEGORIES	%
Nuclear Science & Tech	
Chemistry	
Physics	
Metallurgy	
Biology	
Medicine	
Geology	
Mineralogy	
Mathematics	
Legislation	
Instrumentation	
Health & Safety	

2. **Age of Library** 22 yrs

3. **(a) Size of Agency** 7,700
(b) Total potential User population 4,400
(c) Total active Users 3,000

4. **Users by professional category**
(1) Administrative and Management 50%
(2) Scientists and Engineers 35
(3) Technicians ______
(4) Lawyers 7
(5) Government (Non-Agency) ______
(6) General Public 7
(7) Military Officers <1
(8) ______
(9) ______
(10) ______

5. **Output Traffic**

(a) Reference		**(b) Circulation**	
Ready Ref.	27,000	**ILL-loaned**	
Searches		**-borrowed**	
Bib. Searches		**Journals Routed**	
Referrals		**Book Circ.**	
		Total Circ.	13,500

(c) SDI:
(1) Group Profiles (number) ______
(2) Individual Profiles (number) X
Manual; Experimental Autom.

6. **Services of the Library**

PRESENT	PLANNED
SDI Manual + Exptl Automated SDI Accession lists Periodical routing (semi-automated) Demand bibs (manually produced) Extra-mural search services (DDC/NASA/NLM) Loan (specific items) Disseminate NSA Translations in-house (at DTIE) + purchased (JPRS) Ready reference Photo-duplication of library materials 24-hr/day service	None; emphasis on improving present system

7. **Special Problems of the Library**

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	List Ser. Rec'd Mssg Iss. Claims Ltr	
(b) Input Processing Physical Process. Descr. & Subj. Tagging	J Binding Slips J Holdings List J Sub List (Expir Date) (Splr) (PO 1st copy)	[2] [3]
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing(including duplicating)		
(e) Circulation	J Routing List	[1]

9. Future Plans

[1] Control Circ of Books

[2] Book Processing (Pockets, Labels, etc.)

[3] Use MARC II cataloging

10. **Sequence of Automation Steps:**

Function	Materials	Class of Equipment				
		I M.	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro				(1)	
2. Input Process.	Books Journals Documents Micro				[2] [3] (2)	
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro				[1] (2)	

( ) Past   [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Scientific & Technical Information Division

Parents: Office of Technology Utilization/Office of Organization and Management/NASA

1. Mission

(a) Classification
(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		STID	NASA	**Explicit Info. Mission**	
Level					
Primary		El	RD	**Yes**	**No**
Sec.		SPT	EI	X	

2. Operational Subordinate Elements:

(a) Size; (b) Relative number;
(c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small			**Yes**	**No**
Large		X	X	

3. Organizational Location:

(a) Library
(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library				X
(b) ADP				X

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?		X

2. Age of Library 52 yrs

3. (a) Size of Agency 32,675
   (b) Total potential User population
   (c) Total active Users

4. Users by professional category
   (1) Administrative and Management
   (2) Scientists and Engineers
   (3) Technicians
   (4) Lawyers
   (5) Government (Non-Agency)
   (6) General Public
   (7)
   (8)
   (9)
   (10)

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	NA	ILL-loaned	NA
Searches		-borrowed	NA
Bib. Searches (FY 68)	1,977	Journals Routed	NA
Referrals		Book Circ.	NA
		Total Circ.	262,987 = opn-loop Doc Circ

(c) SDI:
   (1) Group Profiles (number) 189
   (2) Individual Profiles (number) 570

6. Services of the Library

PRESENT	PLANNED
SDI - individual and group Bib Prep - demand [Search] - recurring Repro services for HC + microfiche requests (Open Loop Circulation) Abstract Journal Publication Search Tape Distribution to NASA and contractors Translation + Translation Announcement Tech Briefs Publication Review Publication Special Publication (monos, reference works, bibs, conf procds, etc.)	

7. Special Problems of the Library

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)		
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing		
(e) Circulation		

9. Future Plans

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: Goddard Space Flight Center Library

Parents: Tech Info Div/ Asst Dir. Admin & Mgmt/GSFC/Office of Space Science & Applications/NASA

1. Mission

(a) Classification

(b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency		GSFC	NASA	**Explicit Info. Mission**	
Level			1		
Primary		RD	RD	**Yes**	**No**
Sec.		RD	EI		

2. Operational Subordinate Elements:

(a) Size; (b) Relative number; (c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large				X

3. Organizational Location:

(a) Library

(b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X			X
(b) ADP	X			X

4. Control and Coordination

	Yes	No
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?	X	
(c) **Agency external coordination requirements are high (Agency with other Agency; with State, local, and civilian)?**		X
(d) **Agency subordinate operational elements interact heavily through non-Agency interface?**		X

5. **Subject Overlap:**

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)		X		
(b)	X			

6. **Information Planning:**

(a) An Agency-wide planning body exists?

Yes	No
X	

(b) Agency represented on Government-wide planning body?

Yes	No
X	

7. **Library Budget is Line-Item in:**

	Yes	No
(a) The budget of immediate parent?	X	
(b) The budget of the Agency?	-	-

8. (a) Total size (employees) of Agency 5,000 (est)

(b) Agency Budget (Thousands of Dollars) -

9. **Library Budget**

(a) Personnel	In Hse.	$150,000
(b) Equipment		
(c) Materials	(Incl. Contr.)	$250,000
(d) Total		$400,000

10. **Computer In-Library : Yes _____ No X Cost:** ________

In-Agency : Yes X **No** _____ ________

Contract Svc : Yes X **No** _____ ________

	Yes	No
11. Does Library Administrator have dual line/staff role?		X
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/feasibility study capability?	X	
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS		PROFESSIONAL				NON-PROF.			TOTAL
CSC Code		1410	1412	Other	Total	1411	Other	Total	
Authorized		7				4	1	5	
Filled	Staff	7			7	4	1	5	12
	(Contr).	(+2)			(+2)	(+10)	(+2)	(+12)	(+14)
Vacancies		0				0	0	0	

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Chief, Lib. Branch	1410		MSLS	No		X				(5)
Head, Acquisitions	1410		BS	No		X				10
Coordinator, Ref & Doc. Sec.	1410		MSLS MS (Math)	Yes		X				(1)
Librarian, Reference	1410		-	-		-				5
Librarian, Document	1410									7
2 Contractors	1410									

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books + Monos	50,000 vols	3500/yr	Astronomy	
			Mathematics	
Bound Periodicals	30,000		Physics	
Uncl. TR (HC)	18,000		Electronics	
Class. TR (HC)	2,000		Mechanical Engineering	
Microfiche	200,000			
Equipment Catalog	some		Electrical Engineering	
Manuals			Tracking & Data Acq	
Syst. Specs.				
			Unmanned Satellites Meteorological Communications	
Periodical titles	2,000	100 new per yr		
			Orbiting Observations	
			Space Sciences	

2. **Age of Library** 9 yrs

3. **(a) Size of Agency**
   (b) Total potential User population 5,000
   (c) Total active Users 3,600

4. **Users by professional category**
   (1) Administrative and Management 15%
   (2) Scientists and Engineers 65
   (3) Technicians 10
   (4) Lawyers 5
   (5) Government (Non-Agency)
   (6) General Public
   (7) Social Science 5
   (8)
   (9)
   (10)

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	38,400	**ILL-loaned**	
Searches		**-borrowed**	
Bib. Searches		**Journals Routed**	
Referrals		**Book Circ.**	50,000 (est)
		Total Circ.	

(c) SDI:
   (1) Group Profiles (number) SCAN - Unknown No.
   (2) Individual Profiles (number)
   (informal)

6. Services of the Library

PRESENT	PLANNED
SDI-SCAN (formal by group; informal for individuals) Accession lists Periodical routing Manual Bib Prep (+ some STIF tape runs) Circulation and loan of specific items Holdings list (both book and journal) Translations (purchased or borrowed) Ready Reference Photo-duplication Special book order form for direct use by technical staff	RECON Terminal in GSFC Library

7. Special Problems of the Library

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	(1) See below.	
(b) Input Processing Physical Process. Descr. & Subj. Tagging	(2) ● Prep. cat. cards - EAM(870) (3) Book Catalog ● Journal holdings list (& by title) ● Book holdings list (Call No. auth., and sub.) - 360/30	
(c) Reference Search, Referral, SDI, Retrieval	(5) ● STIF tapes searched (Journals & documents) - 1410	[1]
(d) Publication and Printing	(3) ● KWIC index to documents & books (new acqs) 360/30	
(e) Circulation	● Duplication; *(1) ● Maintain circ. statistics(via 1410)on categories of books, & users; books on loan, overdue notices, etc. [Also use circ. statistics as a selection tool.] ● Microfiche copy & HC blowback	

9. Future Plans

[1] RECON

*Note: Reason for first choice of Circulation: (a) large amount of material handled; (b) wanted to measure user response and use Circ Statistics as selection tool.

10. Sequence of Automation Steps:

Function	Materials	Class of Equipment				
		I M	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books				(1)	
	Journals					
	Documents					
	Micro					
2. Input Process.	Books			(2)	(4)	
	Journals				(4)	
	Documents					
	Micro					
3 Reference	Books					
	Journals				(5)	[1]
	Documents				(5)	[1]
	Micro					
4 Print & Publish	Books				(3)	
	Journals					
	Documents				(3)	
	Micro					
5 Circ.	Books				(1)	
	Journals					
	Documents					
	Micro					

( ) Past [ ] Future

AGENCY & LIBRARY ADMINISTRATIVE DATA

Library (IC) Name: HQ Library

Parents: Office of the Secretary/FCC

1. **Mission**

   (a) Classification
   (b) Has explicit information dissemination statement?

	(a)	(a)	(a)	(b)	
Agency			FCC	**Explicit Info. Mission**	
Level					
Primary			REG	**Yes**	**No**
Sec.			EI		X

2. **Operational Subordinate Elements:**

   (a) Size; (b) Relative number;
   (c) Geographical dispersion

Size	**Number**		**Widely Dispersed**	
	Few	**Many**		
Small		X	**Yes**	**No**
Large			X	

3. **Organizational Location:**

   (a) Library
   (b) ADP Support

Attachment	**Admin. Spt.**	**Res & Devel.**	**Staff**	**Line**
(a) Library	X			X
(b) ADP	X		X	

4. Control and Coordination

	Yes	**No**
(a) Agency central control is strong?	X	
(b) Agency internal coordination requirements are high (among subordinate operating elements)?		X
(c) Agency external coordination requirements are high (Agency with other Agency; with State, Local, and civilian)?	X	
(d) Agency subordinate operational elements interact heavily through non-Agency interface?	X	

5. Subject Overlap:

(a) Between operational subordinate elements

(b) With bodies external to the Agency (Federal or non-Federal)

	Large	Moderate	Small	None
(a)	X			
(b)	X			

6. Information Planning:

	Yes	No
(a) An Agency-wide planning body exists?	X	

	Yes	No
(b) Agency represented on Government-wide planning body?		X

7. Library Budget is Line-Item in:	Yes	No
(a) The budget of immediate parent?		X
(b) The budget of the Agency?		X

8. (a) Total size (employees) of Agency 1,633

(b) Agency Budget (Thousands of Dollars) $ 23,934

9. Library Budget

(a) Personnel ____

(b) Equipment ____

(c) Materials ____

(d) Total $ 50,000 est

10. Computer In-Library: Yes ____ No X Cost: ____

In-Agency : Yes X No ____ ____

Contract Svc: Yes ____ No ____ ____

	Yes	No
11. Does Library Administrator have dual line/staff role?	X	
12. Is he under tight administrative control?		X
13. Does Library have high intra-Agency coordination requirements?		X
14. Does Library have in-house planning/ feasibility study capability?		X
15. Does Library or direct parent have design and development capability?		X

16. Library Staff Summary

POSITIONS	PROFESSIONAL				NON-PROF.			TOTAL
CSC Code	1410	1412	Other	Total	1411	Other	Total	
Authorized								
Filled	2			2	2	1	3	5
Vacancies								

17. Library Staff Training and Experience (Professional)

POSITION	CSC		DEGREE		ADP TNG.					EXP
	Code	GS	Highest	Technical Undergrad.	None	"Exposure"	Informal	OJT	Formal	Library Years
Librarian	1410				X					31 (26-FCC)
Librarian	1410				X					25
Lib Tech	1411				X					12
Lib Tech	1411				X					16
Clerk	0322				X					-

LIBRARY TECHNICAL DATA

1. **Holdings and Growth Rate:**

TYPE MATERIALS	NO.	GROWTH	SUBJECT CATEGORIES	%
Books + Bnd Per.	28,000 vol	450 vol	Telcommunication (Electrical; Electronic & Other Eng; Law; Econ.)	
Periodical Subs	128 titles		Radio	
Legislative Materials	5 VF dws		Telephony	
Misc	14 VF dws		Telegraphy	
			Television	
			Communications Regulations	
			Dominant Use as Law Library	

2. Age of Library 35 yrs

3. (a) Size of Agency 1,633
(b) Total potential User population ______
(c) Total active Users 500

4. Users by professional category
(1) Administrative and Management 15%
(2) Scientists and Engineers 25
(3) Technicians ______
(4) Lawyers 50
(5) Government (Non-Agency) ______
(6) General Public 10
(7) ______
(8) ______
(9) ______
(10) ______

5. Output Traffic

(a) Reference		(b) Circulation	
Ready Ref.	9,000	ILL-loaned	
Searches		-borrowed	
Bib. Searches		Journals Routed	
Referrals		Book Circ.	7,000
		Total Circ.	7,000

(c) SDI:
(1) Group Profiles (number) ______
(2) Individual Profiles (number) ______

6. Services of the Library

PRESENT	PLANNED
Accessions List Bulletin of Analytics on Recent Journal Articles (semi-mo.) Daily Digest of Congressional Record Periodical Routing Prepare Bibs Loan (Specific Items) Ready Reference	(1) Conversion of legislative history of telecommunications to microfilm (2) Move to new quarters - space limited * (3) Production of "Index Digest" by GPO Lintron * non-Library

7. Special Problems of the Library

8. Present and Planned Automated Functions

FUNCTION	PRESENT	PLANNED
(a) Selections and Acquisition (order, claim, records)	No automation in Library.	
(b) Input Processing Physical Process. Descr. & Subj. Tagging		
(c) Reference Search, Referral, SDI, Retrieval		
(d) Publication and Printing(including duplicating)		
(e) Circulation		

9. Future Plans

No automation planned.

10. Sequence of Automation Steps: No automation.

Function	Materials	Class of Equipment				
		I M.	II AM	III EAM	IV DC	V DC/DD
1. Sel. &Acq.	Books Journals Documents Micro					
2. Input Process.	Books Journals Documents Micro					
3 Reference	Books Journals Documents Micro					
4 Print & Publish	Books Journals Documents Micro					
5 Circ.	Books Journals Documents Micro					

( ) Past [ ] Future